MILLER, TYLER MAXWELL, M.M. *Winds of Change* (2013)
Directed by Dr. Alejandro Rutty. 55pp.

Winds of Change attempts to build upon the recent tradition of monophonic compositional practice by combining techniques directed at setting a central musical line to maintain interest and create textural clarity. These techniques are primarily inspired by the works of George Crumb and Tan Dun. *Winds of Change* also includes found and built percussion instruments, which are employed to create a unique timbral sound environment. The combination of these two elements is intended to create a monophonic work that is both expressively clear and unique. Chapter I concerns the basic purpose of the thesis and accompanying document. Chapter II focuses on specific techniques and compositional processes used in *Winds of Change*.

WINDS OF CHANGE

by

Tyler Maxwell Miller

A Thesis Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Music

Greensboro
2013

Approved by

_____
Committee Chair

APPROVAL PAGE

This thesis written by Tyler Maxwell Miller has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair _____
Dr. Alejandro Rutty

Committee Members _____
Dr. Mark Engebretson

_____
Dr. Joan Titus

_____
Date of Acceptance by Committee

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CHAPTER I

INTRODUCTION

With the musical composition *Winds of Change* I have attempted to build upon the recent tradition of monophonic compositional practice through the combination of my personal stylistic understanding of monophonic texture with the implementation of found and built percussion instruments. Monophonic texture is herein defined as the setting of a central prominent line, combined with a background texture that serves to support that line.

There is precedent within recent monophonic practice toward experimentation with found percussion, non-traditional use of common percussion instruments, and percussion-like textures in non-percussion works. These techniques serve as an alternative means to set apart a central idea from the rest of a work. Chapter II references the works of George Crumb and Tan Dun regarding their monophonic techniques and serves to highlight the salient points of their influence on *Winds of Change*.

CHAPTER II

COMPOSITIONAL TECHNIQUES

Winds of Change was constructed as a work characterized by the setting of a central line. Specifically, this setting was created through the use of compositional techniques designed to maintain interest, and create textural clarity. Examining the compositional practices of George Crumb and Tan Dun in light of their influence on *Winds of Change* will help elucidate the manner in which the central monophonic line of the work was set.

Robert Moevs describes a compelling aspect of George Crumb's monophonic style as he demonstrates how Crumb creates a background texture in his works through the manipulation of timbral, spatial, registral, and temporal elements. Moevs describes how Crumb handles these aspects through the terms "repercussion" and "echo."

> If the sound is explosive with instant repeat, the effect is of a repercussion or ricochet; if quieter with somewhat more delayed repeat, it becomes an echo. This device determines the use of two pianos throughout and can extend to mallet percussion instruments. The echo device is pervasive in Crumb's compositions, replacing polyphony, and sometimes is codified in their titles, as the Eleven Echoes of Autumn (Echoes I) 1965.[1]

The technique is thus used to highlight the central monophonic line of a work. This is achieved through the creation or removal of timbral, registral, and temporal space

[1] Robert Moevs, Review of Records: Music for a Summer Evening (Makrokosmos III), *The Musical Quarterly*, Vol. 62, No. 2 (Apr., 1976), 294-295.

between the monophonic center, and the background texture of a work. Further, Moevs points to the isolation or repetition of figures in the background texture itself as the means by which this space is created.

> Heterogeneous borrowings, superpositions, sometimes rudimentary transcriptions […] sounds, motives, phrases, passages, procedures, entire structures fail to break this persisting unity, but rather point up the sense of constriction produced by tightly circumscribed use of primary material, an assemblage of spooky effects and symbols chosen to evoke a particular mood, and a compositional method reduced essentially to their simple concatenation.[1]

Stated another way, these individual gestures do not constitute the central monophonic line but rather work in tandem to frame and clarify, as oppose to form, a unified whole.

These techniques are important in regards to *Winds of Change* due to their perceived effectiveness in creating textural clarity and definition regarding the setting of a central monophonic line.

Similarly, *Winds of Change* is concerned from the outset with creating a sound world within which the central idea is placed. The sound world is presented first and is given the time to develop before the central line enters. The first two pages of the score show this sound world is constructed exclusively in the percussion lines. This supportive texture is created through the use of slate gongs and a bowed cymbal on timpano. This combination of two distinct sounds, which are rich in unique timbral characteristics, serves to define the sound world of the piece immediately (see Figure 1).

[2] Ibid., 302

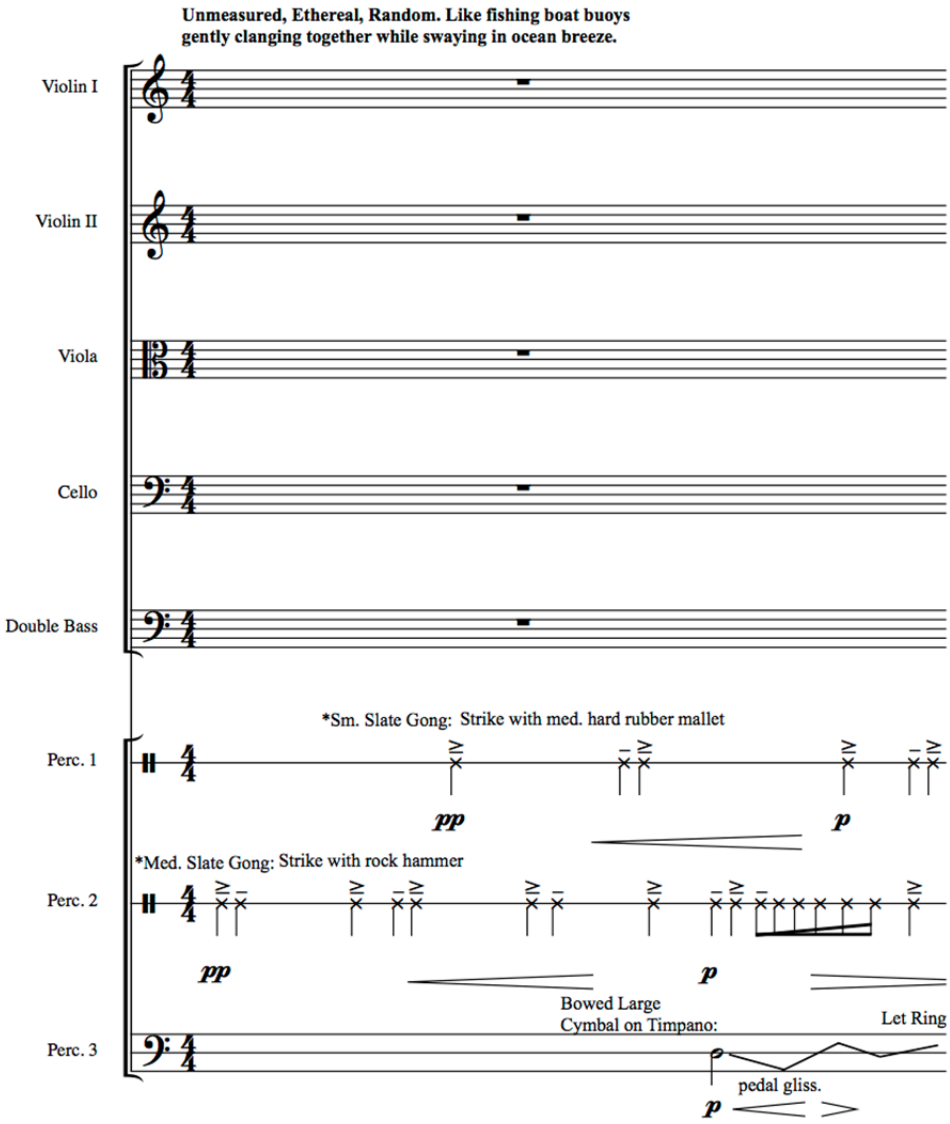


Figure 1. Beginning Sound Environment of *Winds of Change*.

After the sound world has been thoroughly exposed the central monophonic line enters in the cello at Rehearsal A. Simultaneous movement between the monophonic center, and the supportive background texture is purposefully avoided. The avoidance of concurrent movement between the parts is one of the defining characteristics of the way

the central idea is set in this instance. This is similar to the way Crumb employs the techniques of repercussion and echo, and the way textural clarity is created by avoidance of overlapping elements of the central monophonic line and supporting sound world.

Tan Dun's monophonic compositional style shares the characteristic adherence to textural clarity apparent in Crumb's works. Tan constructs elaborate sound environments within each of these works through innovative uses of percussion instruments. These sound environments are constructed primarily in regard to timbre and are designed to change through minute timbral alterations over the course of a work.

An example of Tan's manipulation of timbre is apparent in the score to the film *Hero*.[2] This film consists of a single story told three separate ways. While subtly different, these stories remain true to a single overarching plot line. Tan mirrors this narrative style timbrally. He attaches the timbre of a small wind chime to the character Flying Snow during the first version of the story at 0:18:25. A similar chime is used in conjunction with the metallic sounds of clashing swords, the sounds of these swords hitting water, and a heavy echo, in the second version of the story at 0:52:54. Yet another chime can be heard in the final version of the story at 1:13:03. Each version of the chime is characterized by a unique timbre. The subtle differences in timbre between these sections help to create an added sense of interest. They are not sufficiently different from one another as to prevent their contextualization as extensions of one another.

This technique is employed in *Winds of Change* through the shift from a bowed cymbal on timpano to a bowed nipple gong in the third percussion line. This effect is

[2] Quentin Tarantino, *Hero*, Burbank, CA: Miramax Home Entertainment. DVD, 2004.

used to demarcate the three-section structure of the work. These sections are from the beginning to rehearsal letter D, rehearsal letter D to F, and rehearsal letter F through the end of the piece. The effect here is a shift between the brightly metallic sounds of the bowed cymbal in the first section, to the more resonant and clearly pitched sounds of the nipple gong. There is not a timbral development between these two elements, but a direction shift from one to the other. This reflects the influence of Tan's use of chimes in *Hero* by moving between timbres that are sufficiently similar to maintain overall contextual continuity, while simultaneously maintaining interest and variability in an otherwise monophonic texture.

On a local level there is interplay between the central line and background texture in terms of the shape of certain gestures. This principle is employed to add continuity to the work. An example of this interplay can be seen at rehearsal letter B where the percussion figures mimic the upward motion seen slightly before and after in the cello line. The technique of shifting the basic contour of the central line between various instruments as well as between the central line and background texture is employed throughout the work (see Figure 2).

Similarly, the three-note arch that first appears with the opening cello line at rehearsal letter A (see Figure 3), appears frequently in the work and is moved between parts and between different textures.

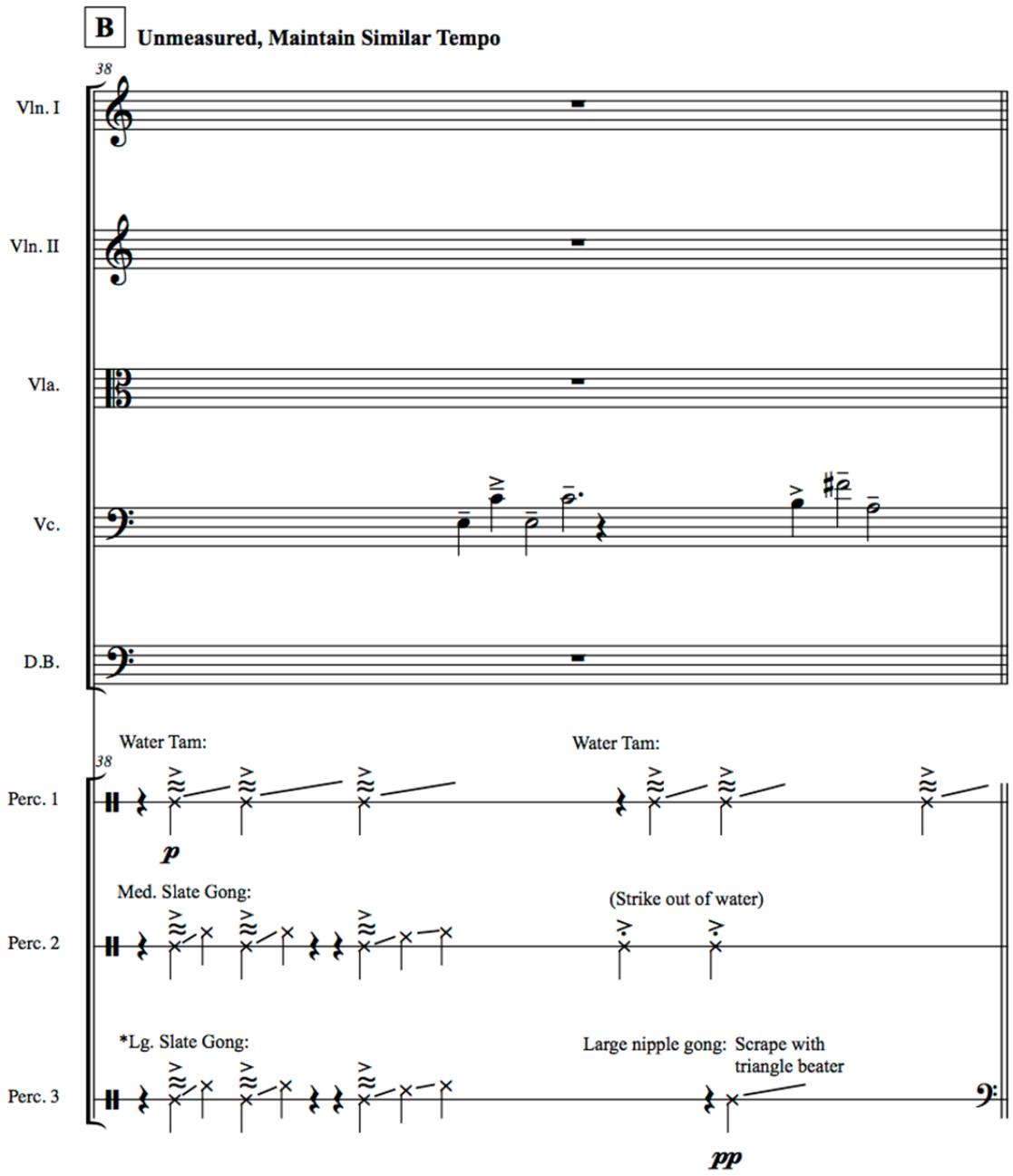


Figure 2. Shifting Contour Between Central Line and Sound Environment.

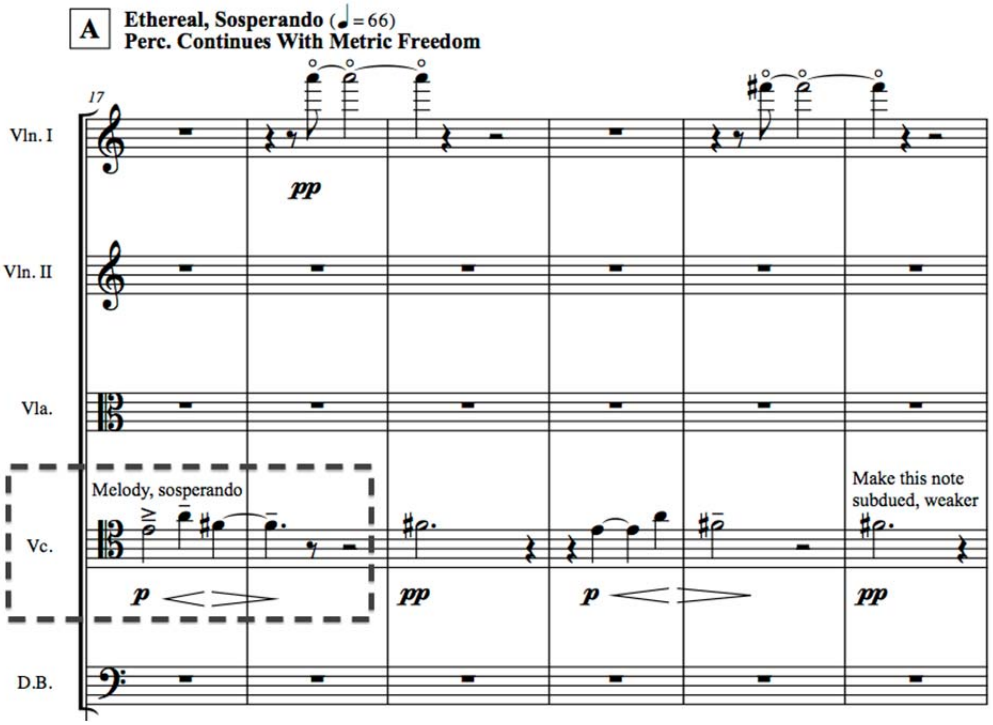


Figure 3. Opening Arch Figure at Rehearsal Letter A.

One notable example of this figure occurs after rehearsal letter G. In this instance, the Cello line retains the function of the "central line," while the other string parts mirror it's three-note gestures. This can be seen in the first and second violins in measures 138–141, and again in the second violin in measures 146–149 (see Figure 4).

There is a tendency throughout the work to construct gestures by combining instruments from the percussion section and the string quintet (see Figure 5). These gestures serve to add continuity and interest to the background texture. They also form a bridge between the string quintet and the percussion section. This bridge is crucial in the realization of the work due to the tendency to conflate entire string quintet with the central line itself. This is due primarily to the shared timbre within the string quintet, and

the fact that the central line largely resides in the cello part throughout the work. Constructing gestures between the percussion and string lines as they function in the background texture serves to diminish the impact of this tendency on the overall effectiveness of the work.

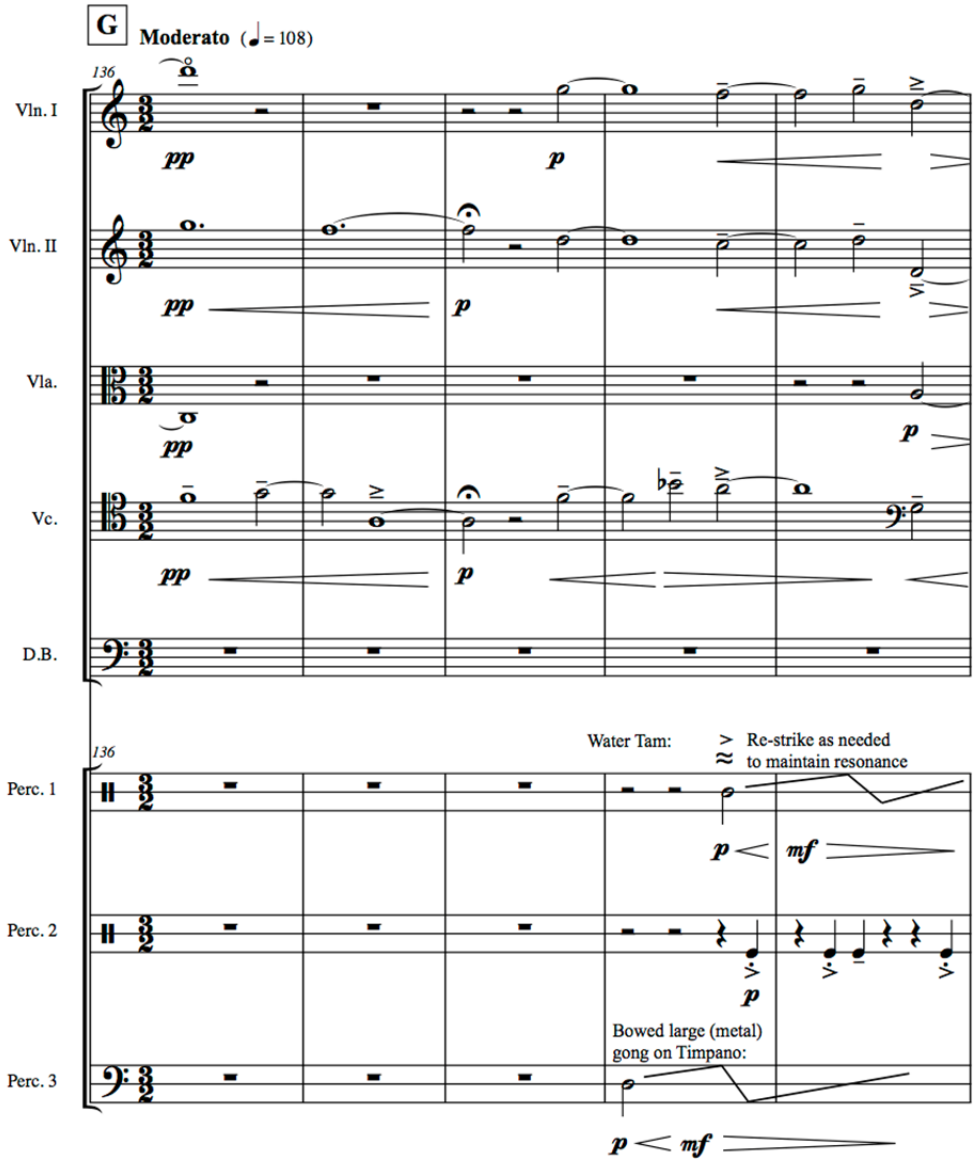


Figure 4. Reappearance of Arch Figure at Rehearsal Letter G.

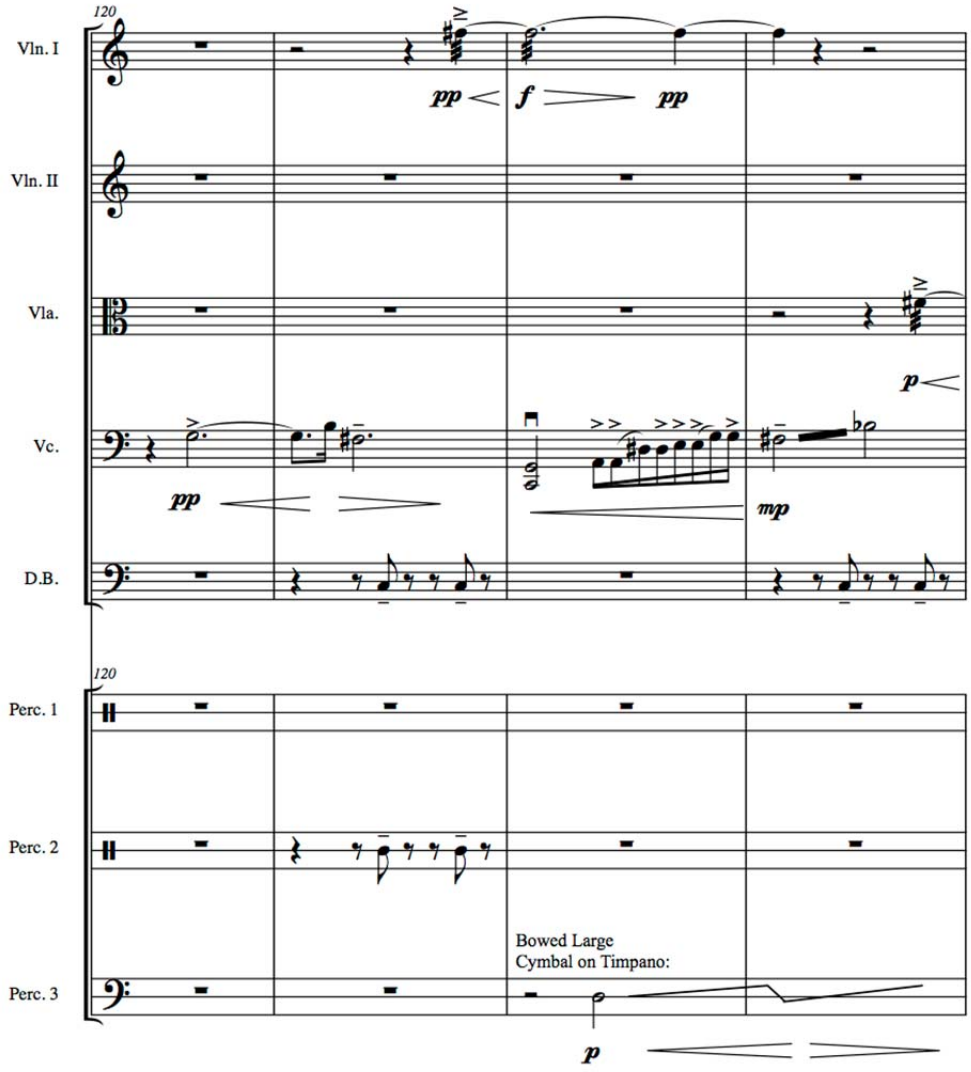


Figure 5. Shared Gesture Between Percussion and Strings

Another element, which adds continuity to the work, is the figuration of the bowed cymbal on timpano found in Percussion 3. This figure instructs the performer to begin bowing with the pedal set to a pitch in the center of the drums' range. The performer then executes a gliss upwards, followed by a fall to a pitch below the center of

the instruments range and a second gliss upwards. This figure was specifically used for the timbre and tone quality produced by this specific series of glissandi.

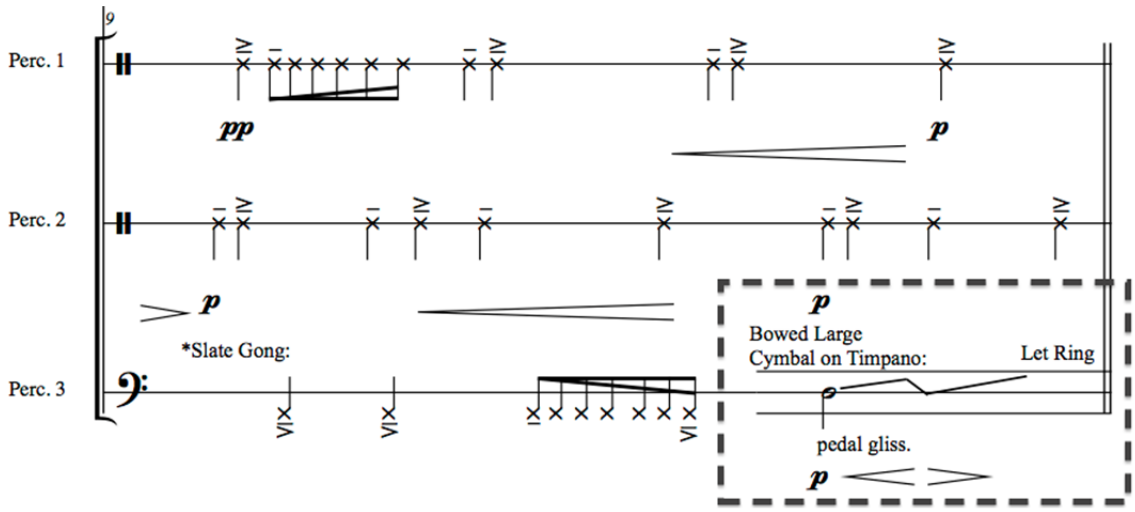


Figure 6. Bowed Cymbal on Timpano Figuration.

Conclusions

The techniques discussed above are employed in *Winds of Change* with the unifying purpose of textural clarity. They are intended to create an evocative sound environment that supports the central line of the work. The piece is further defined by its use of built and found percussion. *Winds of Change* is best understood, then, as a combination of monophonic compositional technique, textural clarity, found and built percussion, and my personal aesthetic principles. Taken together these elements are intended to stretch a single central line throughout the work, while maintaining clarity and interest throughout.

REFERENCES

Hung, Eric, "Tan Dun Through the Lens of Western Media (Part II)," Notes, Vol. 68, No. 3, March 2012, 659–666.

Moevs, Robert, Review of Records: Music for a Summer Evening (Makrokosmos III), The Musical Quarterly, Vol. 62, No. 2 (Apr., 1976).

Tarantino, Quentin, *Hero*, Burbank, CA: Miramax Home Entertainment. DVD, 2004.

Tarantino, Quentin, *Hero Defined*, Burbank, CA: Miramax Home Entertainment. DVD, 2004.

APPENDIX A

INSTRUMENT CONSTRUCTION

The instruments used in this work range from those found in common practice, such as the string quintet, to unique instruments constructed and found with the specific intent of being used in this piece.

The stones used in the original performance were made of granite, selected specifically for its sound quality and resonance. Likewise, they were chosen to be of similar size and spherical shape roughly that of a baseball. Any similarly sized granite stones should suffice in a performance of this work.

The gongs called for in the work were constructed from common roofing slate. Any similar slate roofing tiles should work in the construction of these gongs for a performance.

Three types of slate, quarried by the Camara Slate Products Company, and Hilltop Slate, Inc., were used to construct the gongs used in the original performance. These three types of slate are *Camara Unfading Mottled Green and Purple Slate*, *Hilltop Slate Vermont Purple*, and *Hilltop Vermont Grey*. Two tile thicknesses, 3/8 and 1/4 inch, were used. These specific thicknesses have the best combination of durability and resonance. The thinner tiles resonate better, while the thicker tiles possess a higher durability. The pitch of each piece of slate is difficult to judge by the apparent size or thickness of each tile due to the large degree of variability in the material.

The slate gongs are constructed by drilling holes in slate roofing tile. These holes allow for the slate tiles to be strung and hang freely. The holes should be equally spaced, between one and two inches, from the edges of the slate so the tile will hang evenly.

A 1/8-inch titanium drill bit was used in combination with a standard consumer grade Black and Decker drill to create these holes. There was some tendency for the slate to cleave, or flake, during drilling. Increasing drill speed while decreasing drill pressure proved successful in preventing the tiles from breaking during this process.

The slate gongs produce a range of different tones depending on where they are struck, the implement used to strike them, and the unique characteristics of each individual piece of slate. A soft (as opposed to hard) rock hammer is used in conjunction with medium-hard rubber mallets to strike the slate in this piece. This allows for a metallic and louder sound when struck with the rock hammer, and a softer, duller sound when struck with the rubber mallets.

The slate itself is quite durable, though it does tend to flake during performance. Further, a great deal of sound can be created without the use of a large amount of force. The gongs should be struck gently at the outset of rehearsal. Increased force can then be employed as familiarity with the material increases.

Slate gong construction pictures:

Figure A-1. Drill used during the construction of the slate gongs

Figure A-2. Slate gongs constructed from 3/8 inch roofing slate

Figure A-3. Slate gongs constructed from 1/4 inch roofing slate

Contact information for slate companies:

Camara Slate Products
"Quarriers and Fabricators of Natural Vermont Slate Products"
PO Box 8, 963 S. Main St.,
Fair Haven, VT 05743
Phone: 802-265-3200
www.camaraslate.com

Hilltop Slate Inc.
PO Box 201, Route 22A
Middle Granville, NY 12849
Phone: (518) 642-2270
www.hilltopslate.com

APPENDIX B

SCORE OF *WINDS OF CHANGE*

Duration: 14 min

Instrumentation

String Quintet and Percussion

Violin I
Violin II
Viola
Cello
Double Bass

3 Percussion Parts:

Perc. 1:
- Dumbek
- Water Tam
- Small Nipple Gong
- Spinning Plate Gong

Perc. 2:
- Djembe
- Medium Nipple Gong
- Large Nipple Gong

Perc. 3:
- Djembe
- Large Cymbal
- Timpani
- Bass or Cello Bow
- Sus. Cymbal
- Triangle Beater

Shared:
- Slate Gongs (At least three: low, med., high)
- Soft Rock Hammer
- 2 Five-Gallon Buckets
- Large Water Container
- Stones

Percussion Notes:

Stones

The stones used in the original performance were made of granite, selected specifically for sound quality and resonance. Likewise, they were chosen to be of a similar size and spherical shape, roughly that of a baseball. Any similarly sized pairs of granite stones should suffice in a performance of this work.

Slate Gongs

1) Types: Winds of Change calls for 3 slate gongs. These can be constructed from standard 3/8 inch roofing slate. Please see separate instructions for detailed information on how to construct these gongs.

2) Mallets and other beaters: The piece calls for two primary types of beaters: med. Rubber mallets, and a soft rock hammer.
    a. Where a soft rock hammer is unavailable, an ordinary carpenters hammer will suffice, though it should be used in a more delicate fashion to avoid breaking the slate.

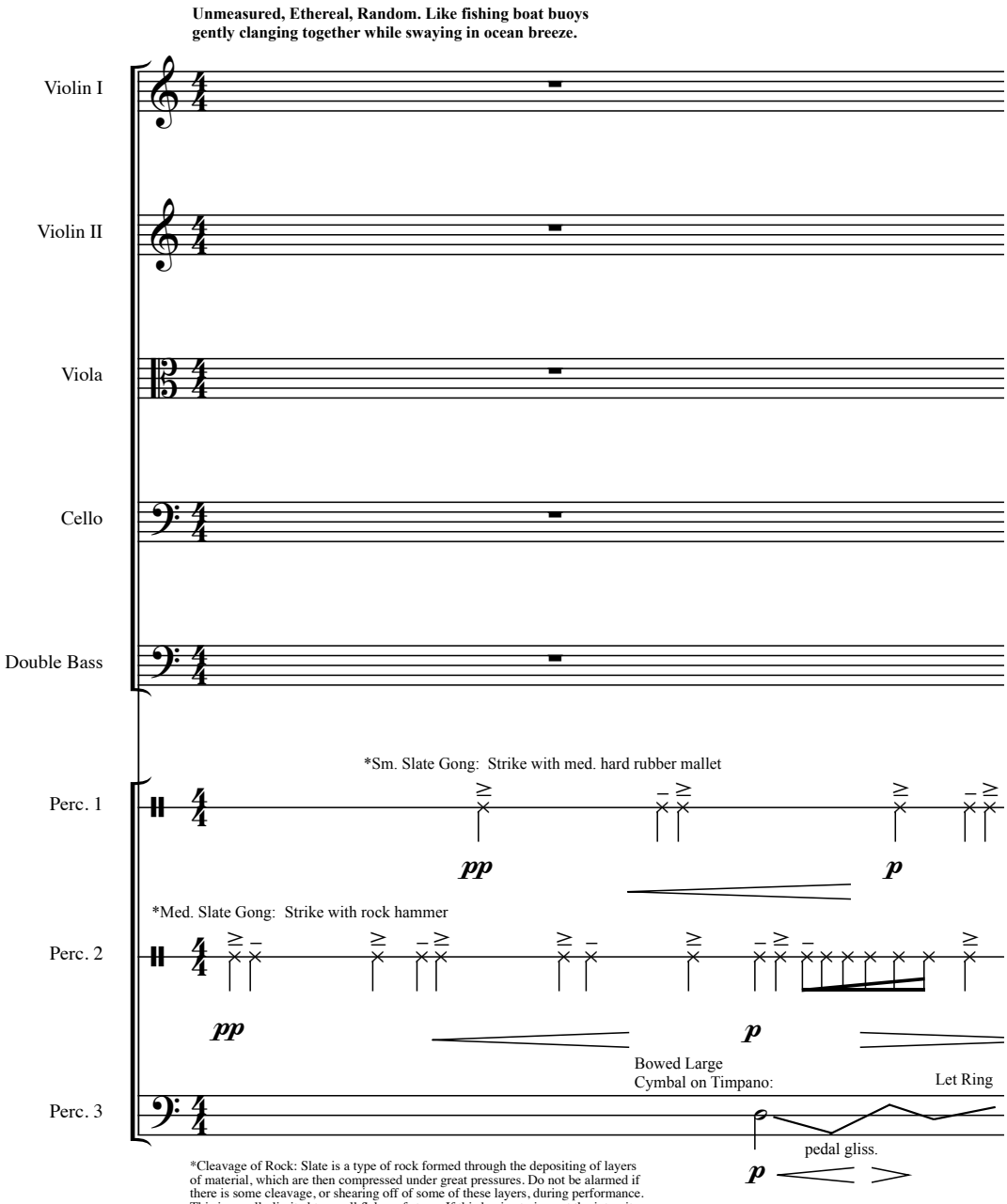
3) Strike Gongs Over Water: Whenever possible the slate gongs should be struck over a large container of water, such as a five-gallon construction bucket. This serves to increase the resonance of the gong.

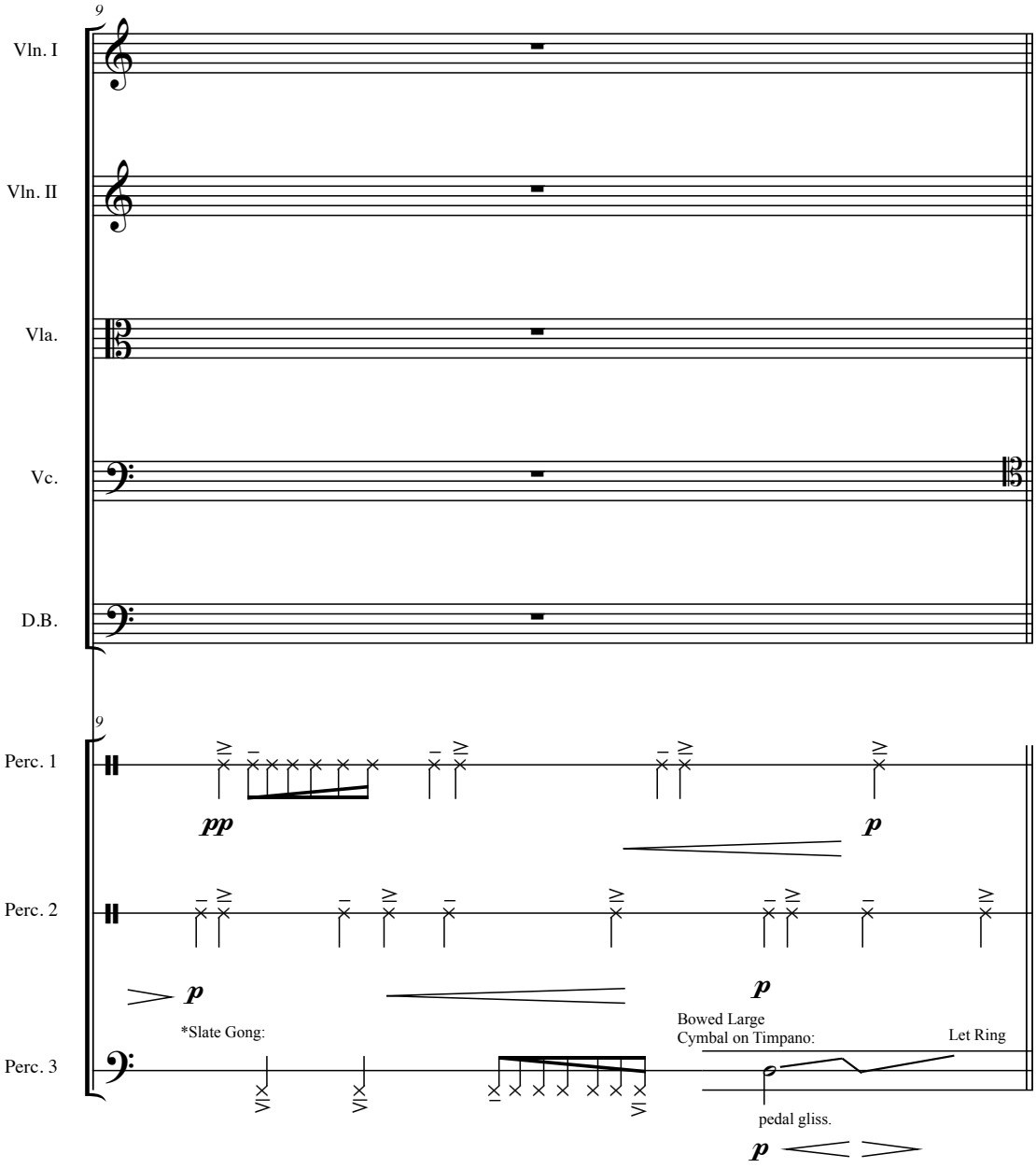
4) Slate Gongs in Water: Two different methods of playing the slate gongs in water are employed in this piece.
    a. ≈ Instructs the performer to strike the gong while partially submerged in water. When this symbol is not employed and the performer is instructed to play a "water slate gong," or "water tam," the player should strike the instrument before lower it into the water.

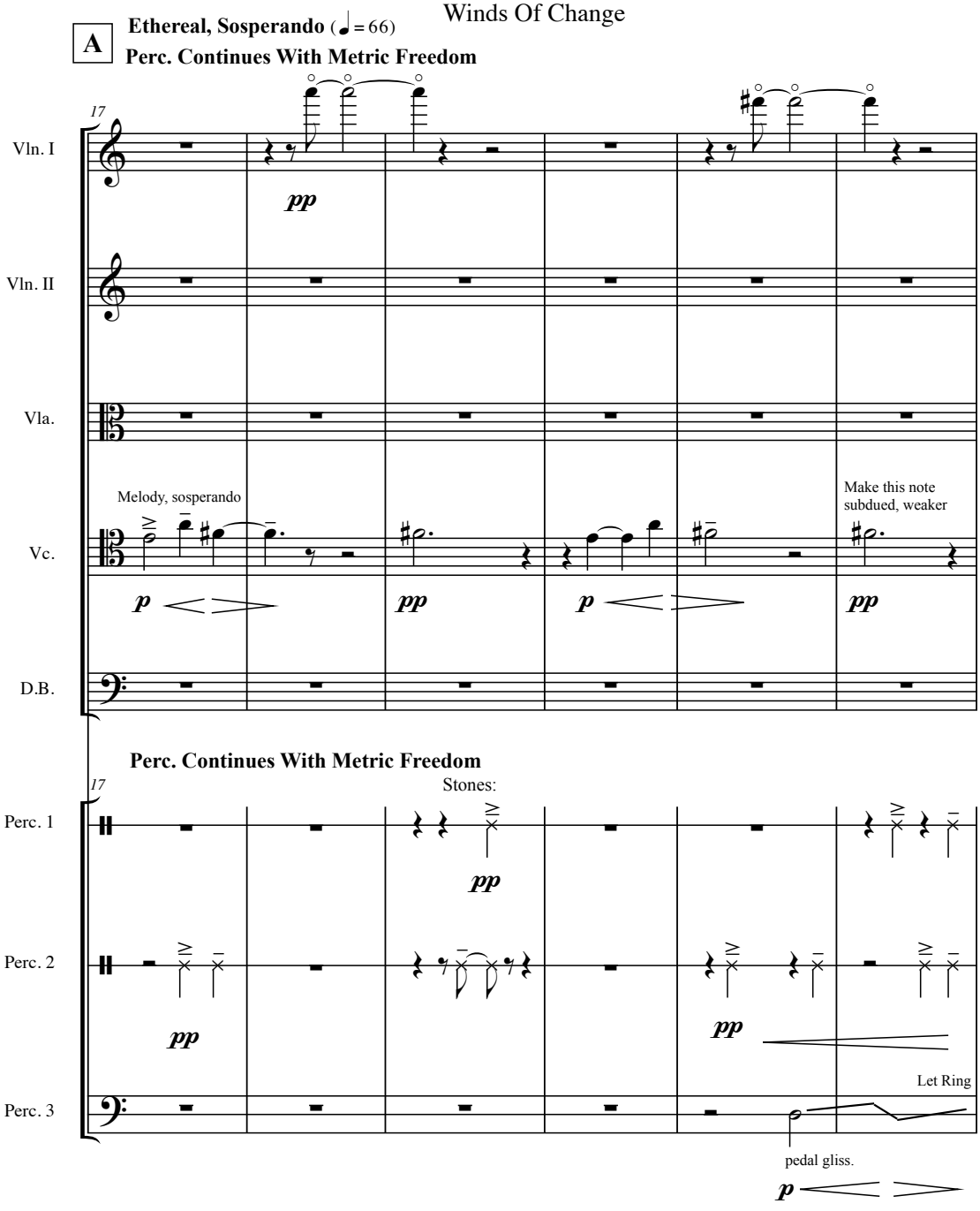
Winds of Change

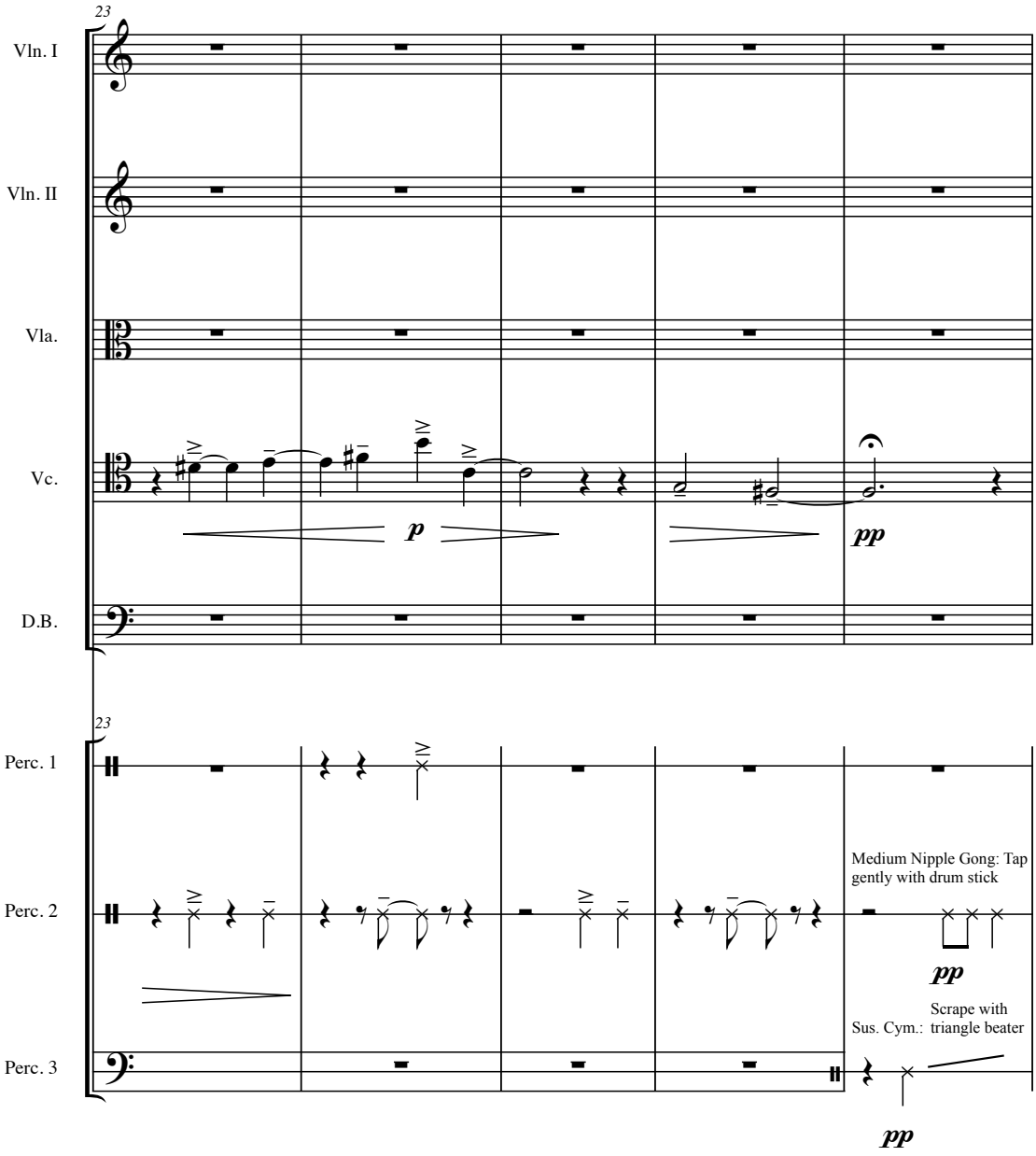
Score

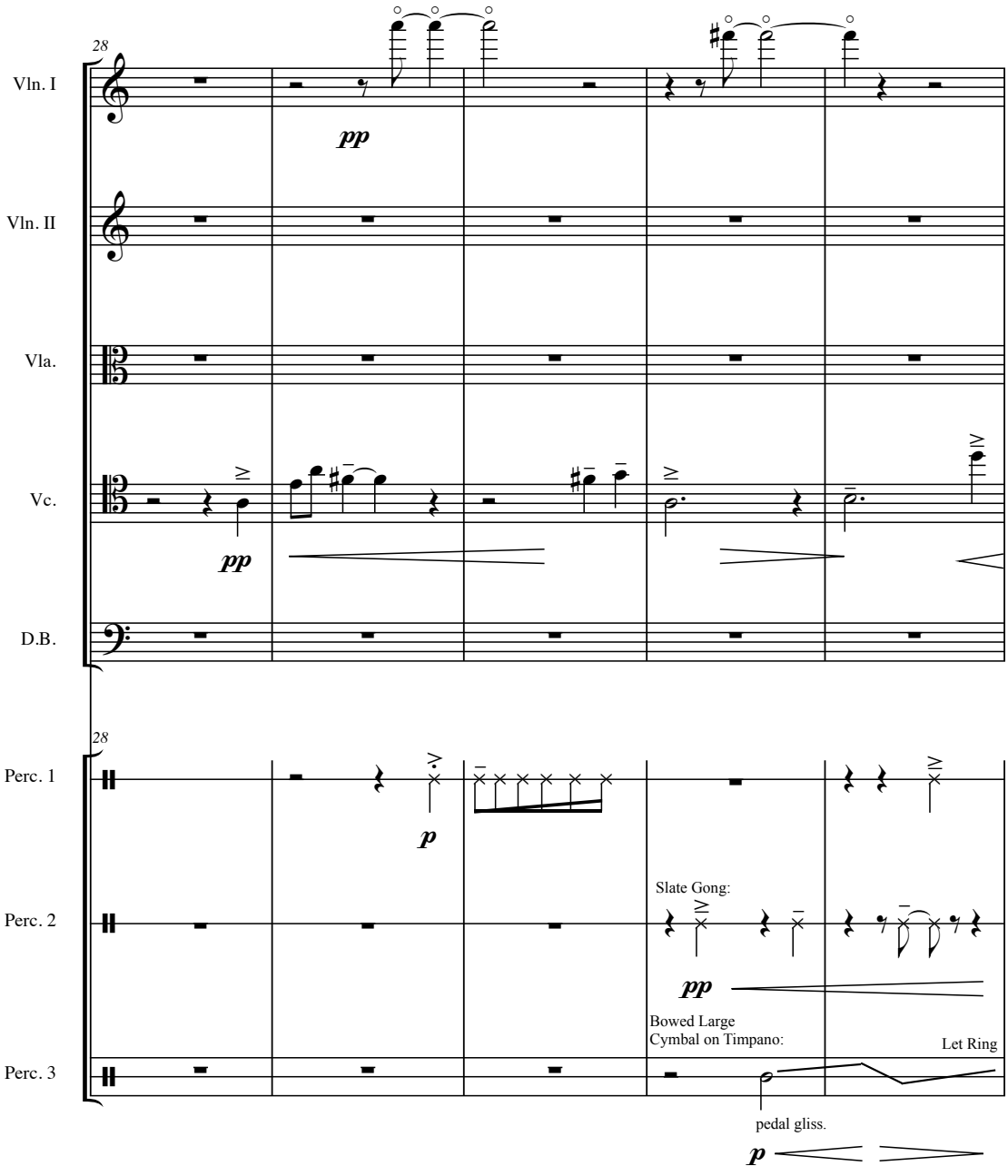
Tyler Miller

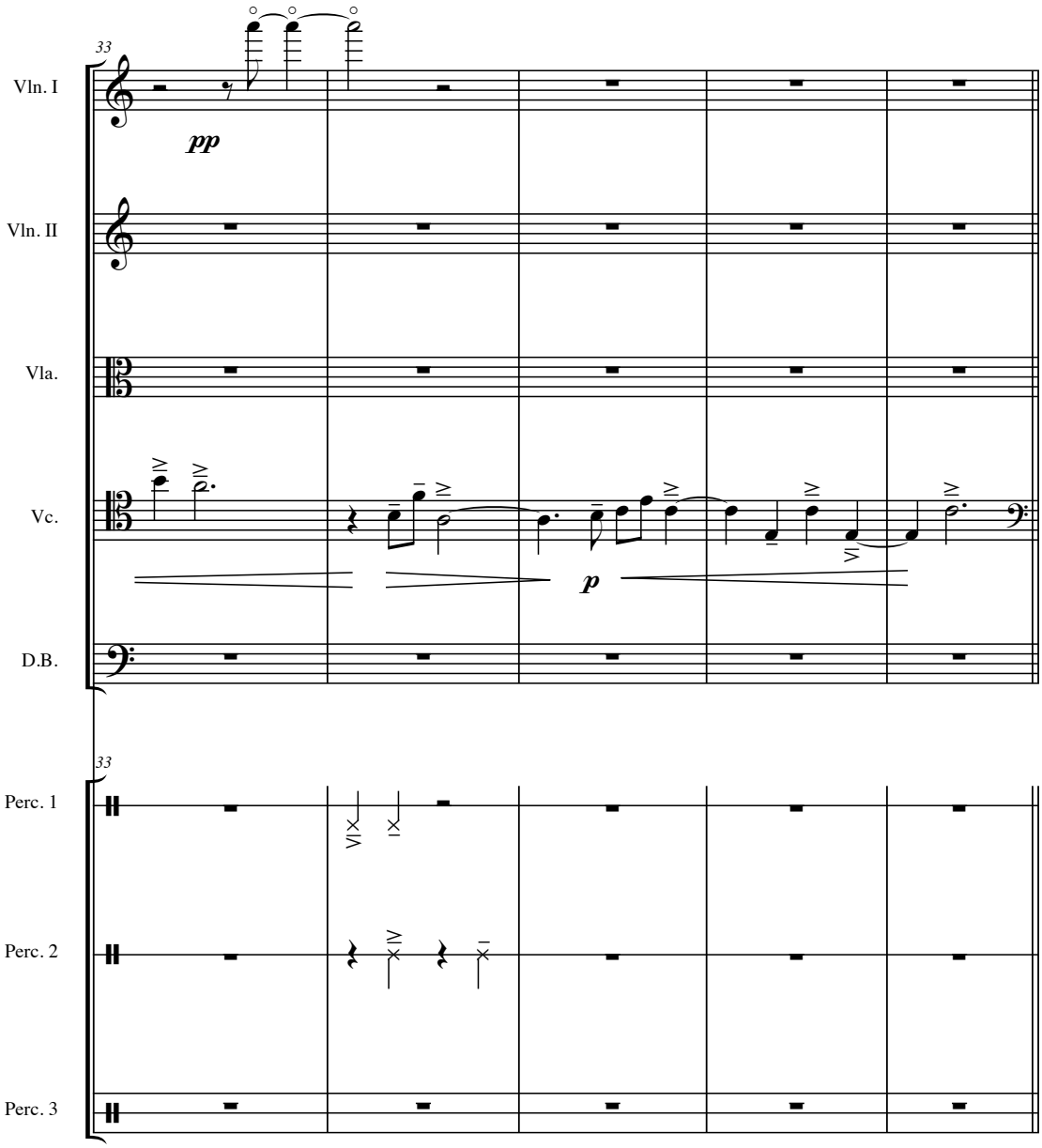


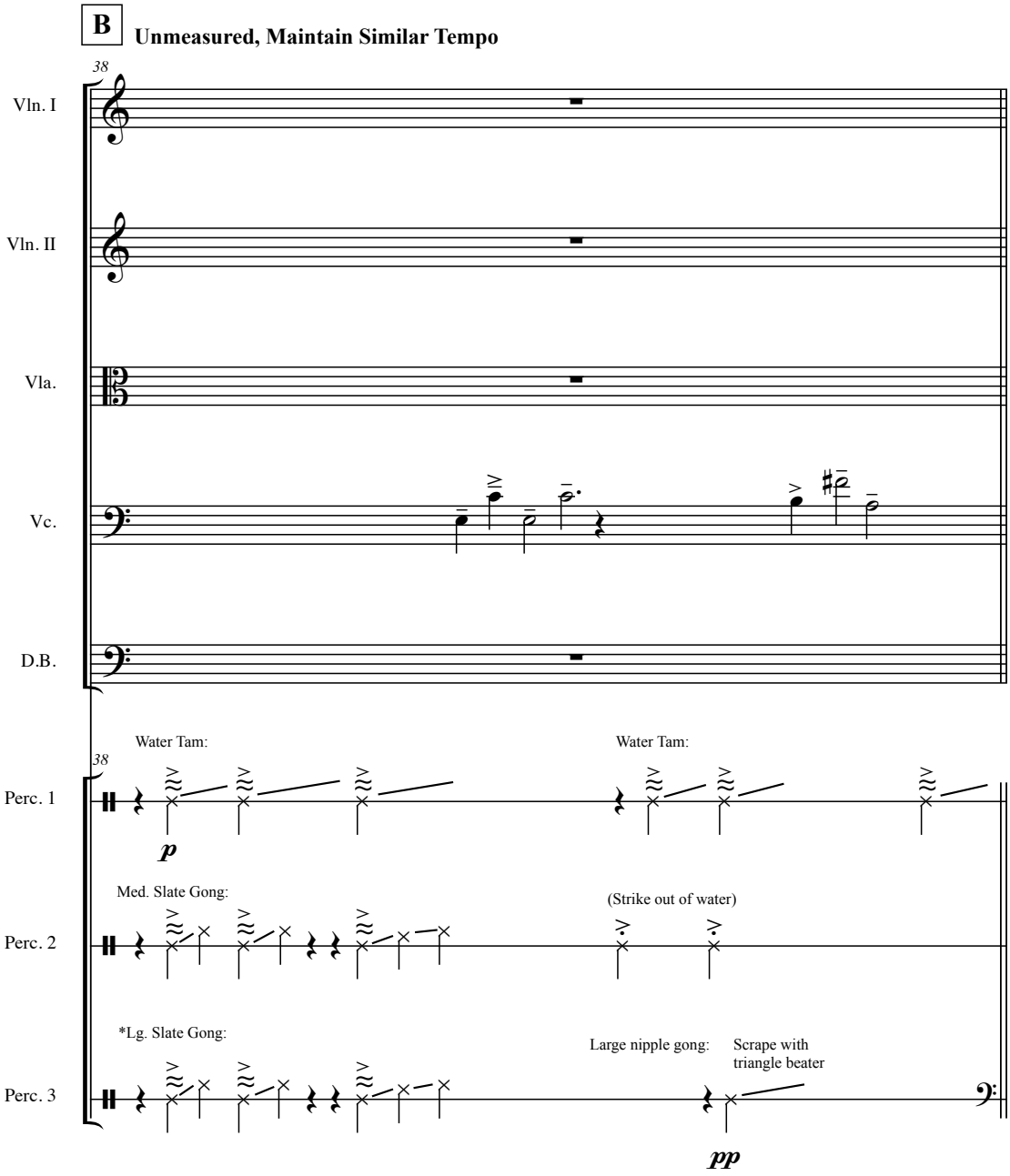

9
Vln. I
Vln. II
Vla.
Vc.
D.B.
9
Perc. 1
pp
p
Perc. 2
p
p
*Slate Gong:
Bowed Large
Cymbal on Timpano:
Let Ring
Perc. 3
pedal gliss.
p

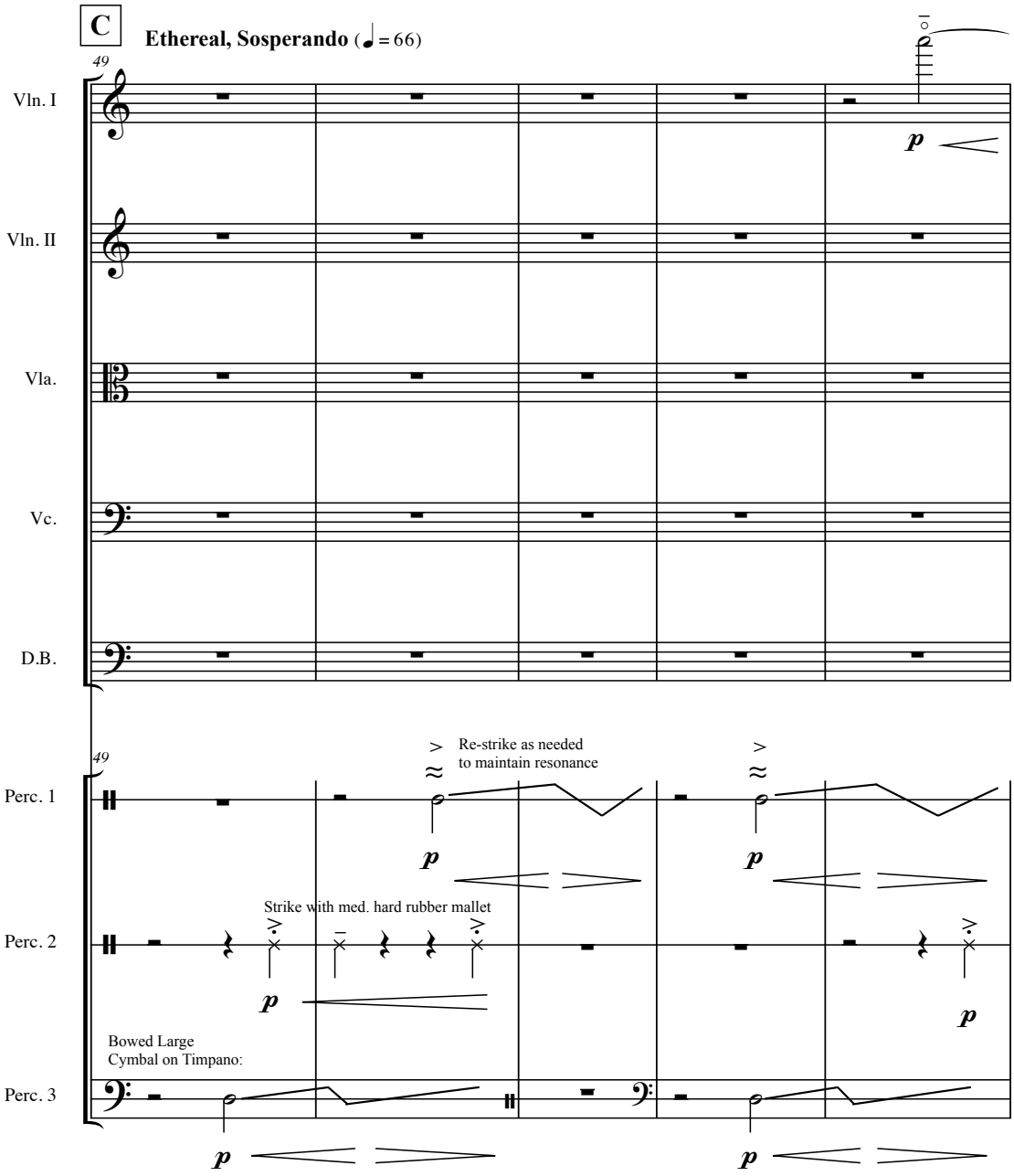

A
Ethereal, Sosperando (♩= 66)
Perc. Continues With Metric Freedom
17
Vln. I
Vln. II
Vla.
Melody, sosperando
Make this note subdued, weaker
Vc.
D.B.
Perc. Continues With Metric Freedom
17
Stones:
Perc. 1
Perc. 2
Perc. 3
Let Ring
pedal gliss.

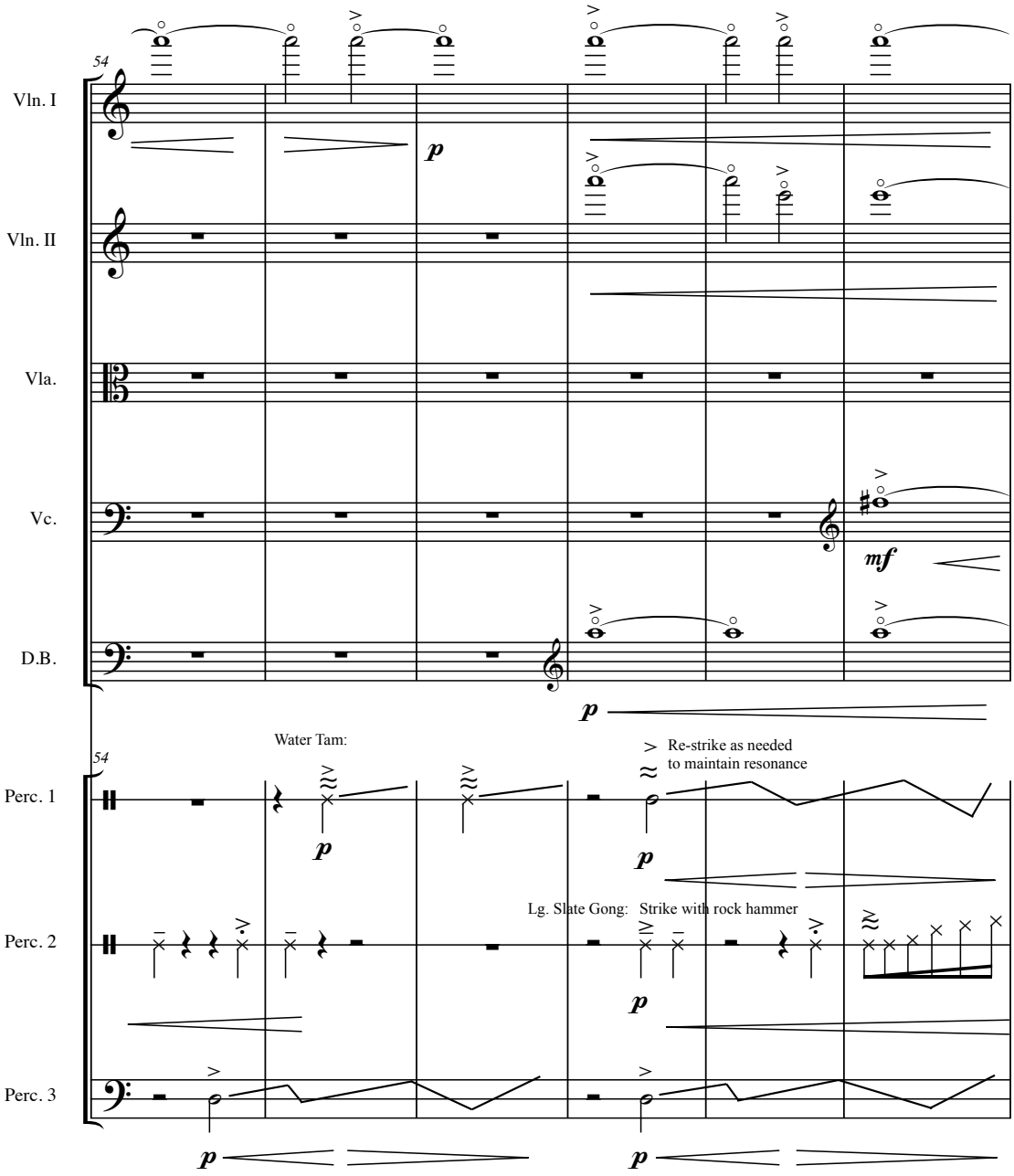

23
Vln. I
Vln. II
Vla.
Vc.
D.B.
p
pp
23
Perc. 1
Perc. 2
Perc. 3
Medium Nipple Gong: Tap gently with drum stick
pp
Scrape with
Sus. Cym.: triangle beater
pp

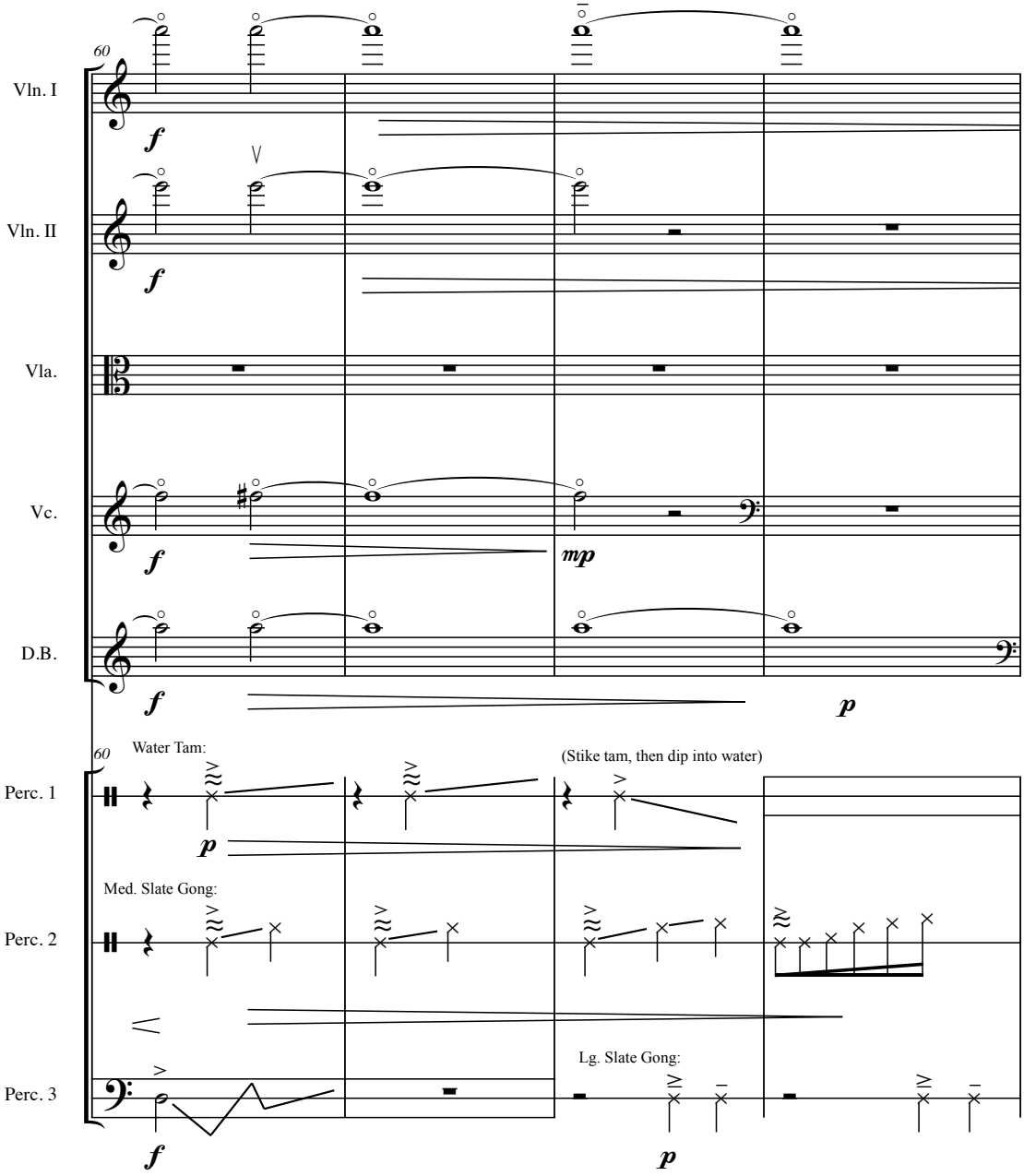

28
Vln. I
pp
Vln. II
Vla.
Vc.
pp
D.B.
28
Perc. 1
p
Perc. 2
Slate Gong:
pp
Bowed Large
Cymbal on Timpano:
Let Ring
Perc. 3
pedal gliss.
p

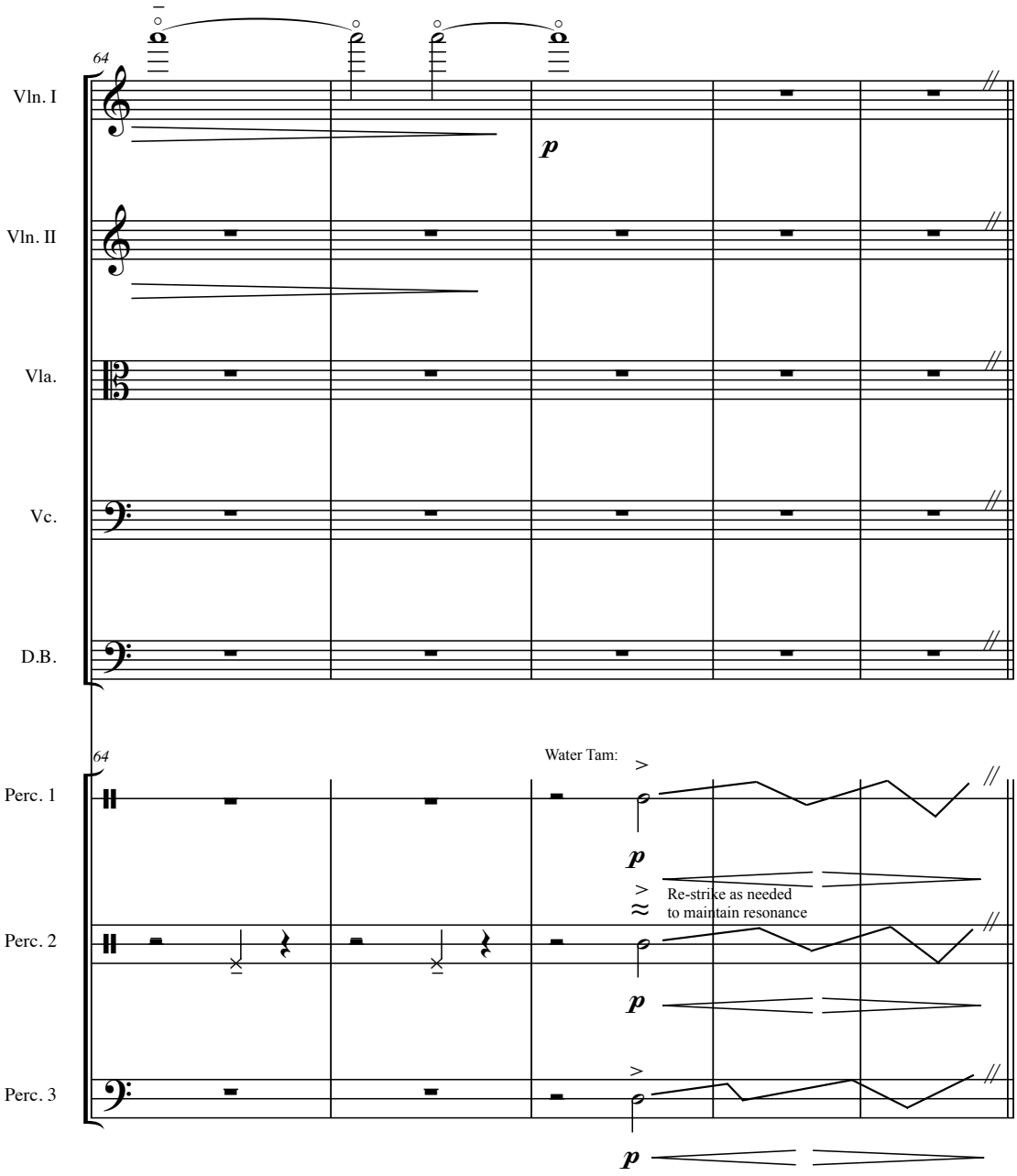

33
Vln. I
pp
Vln. II
Vla.
Vc.
p
D.B.
33
Perc. 1
Perc. 2
Perc. 3

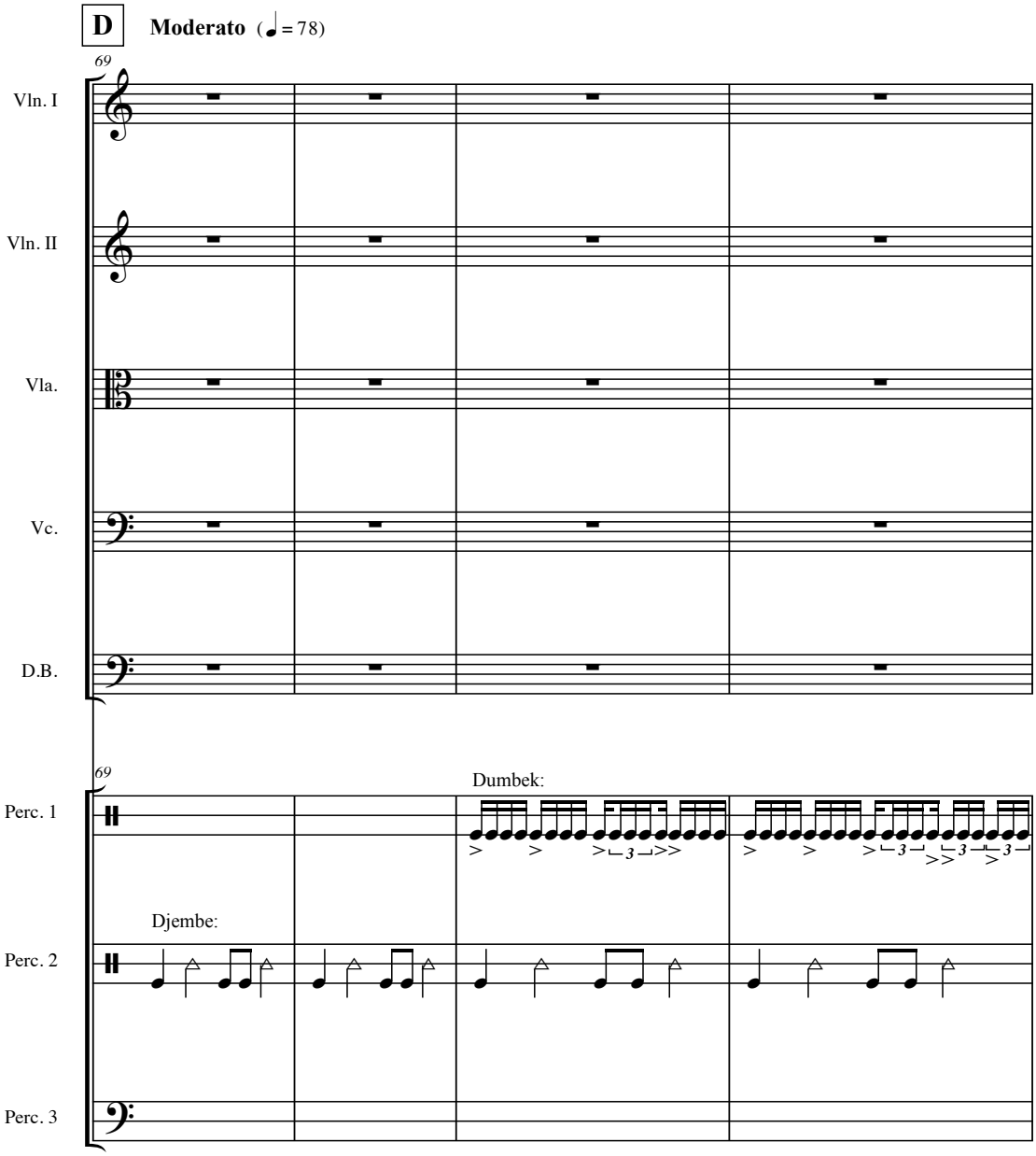

B
Unmeasured, Maintain Similar Tempo
38
Vln. I
Vln. II
Vla.
Vc.
D.B.
38
Water Tam:
Water Tam:
Perc. 1
p
Med. Slate Gong:
(Strike out of water)
Perc. 2
*Lg. Slate Gong:
Large nipple gong:
Scrape with
triangle beater
Perc. 3
pp

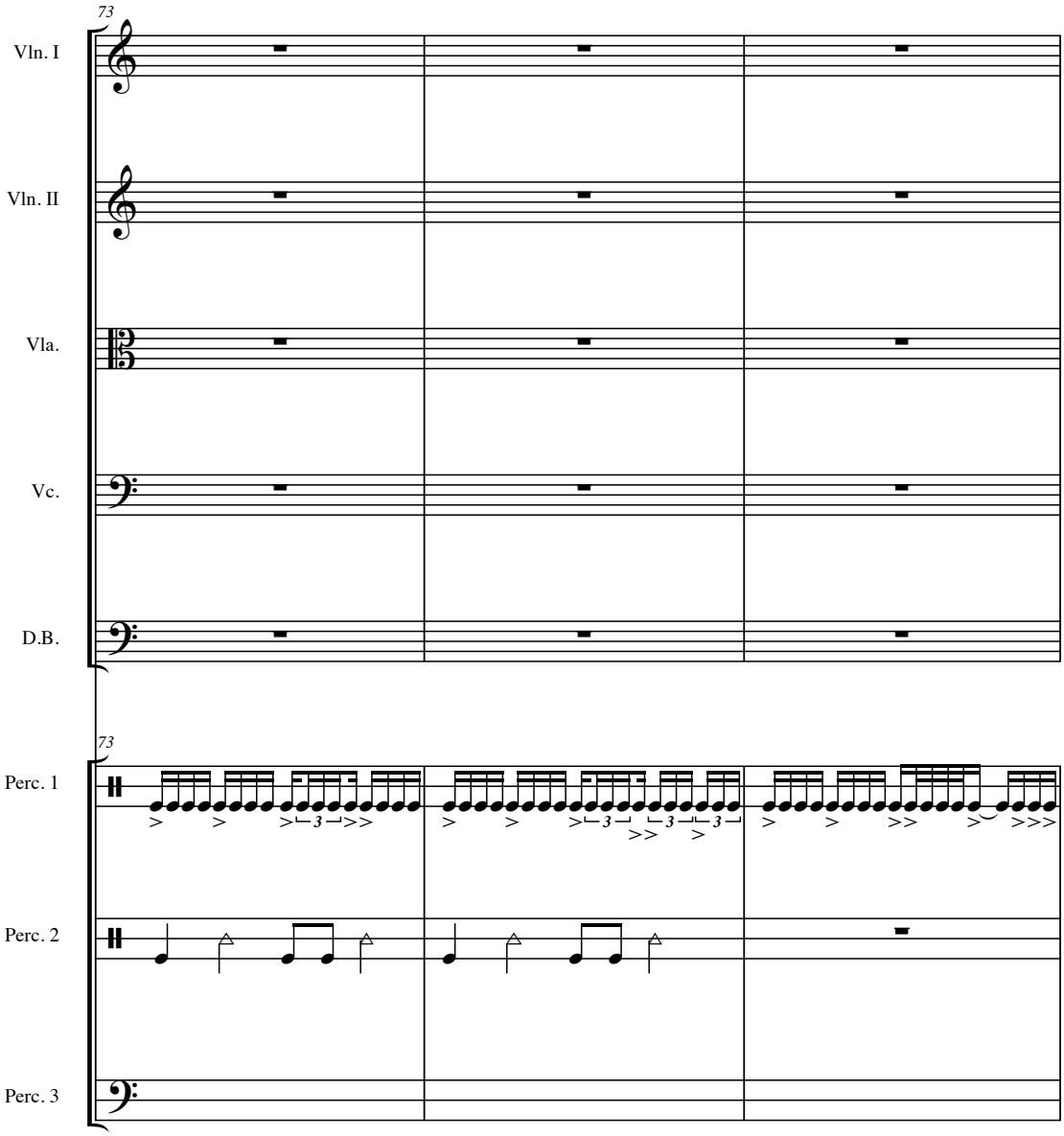

C
Ethereal, Sosperando (♩= 66)
49
Vln. I
Vln. II
Vla.
Vc.
D.B.
49
Re-strike as needed
to maintain resonance
Perc. 1
Strike with med. hard rubber mallet
Perc. 2
Bowed Large
Cymbal on Timpano:
Perc. 3
p

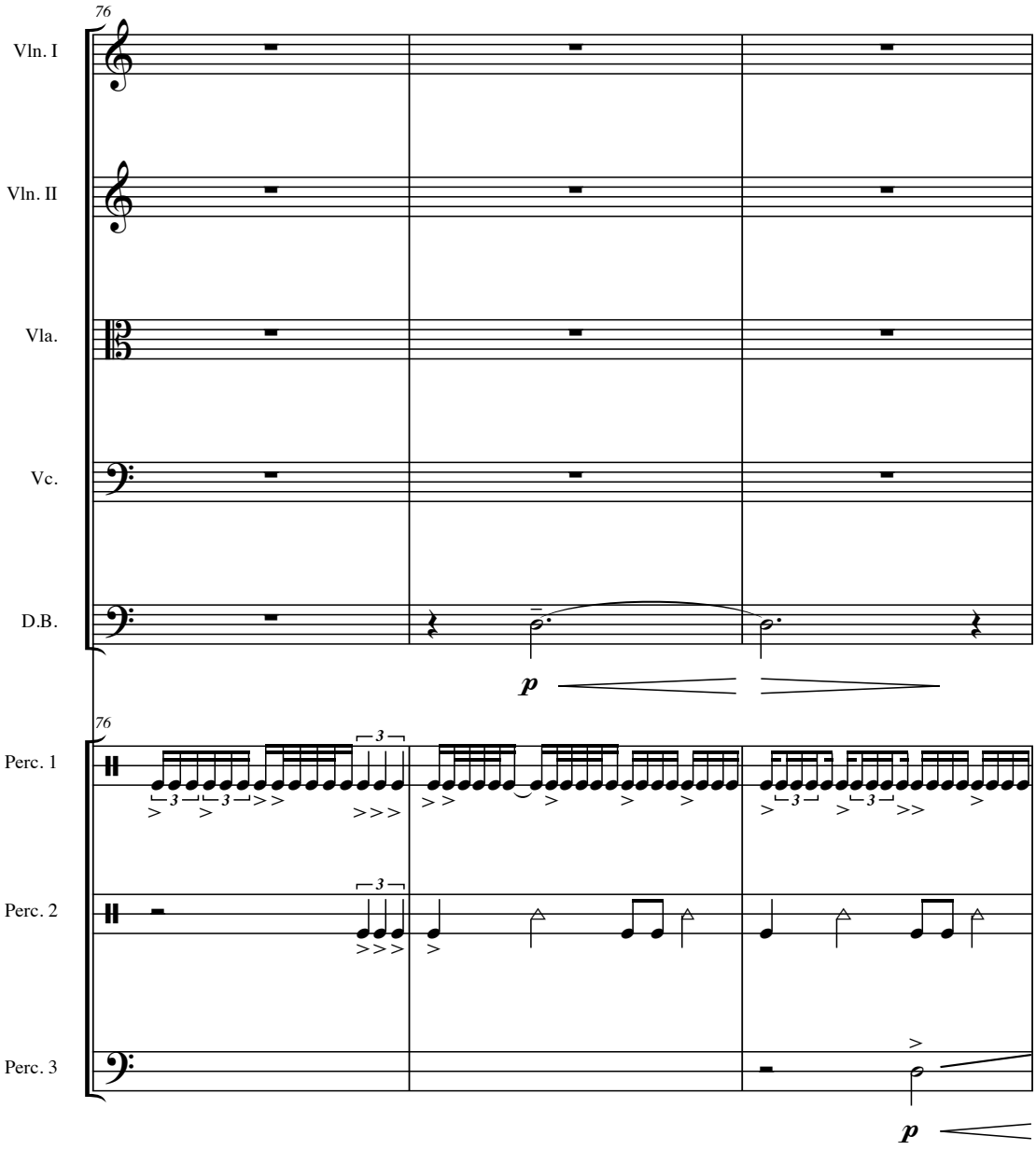

54
Vln. I
Vln. II
Vla.
Vc.
D.B.
p
mf
p
54
Water Tam:
Re-strike as needed
to maintain resonance
Perc. 1
p
p
Lg. Slate Gong: Strike with rock hammer
Perc. 2
p
Perc. 3
p
p

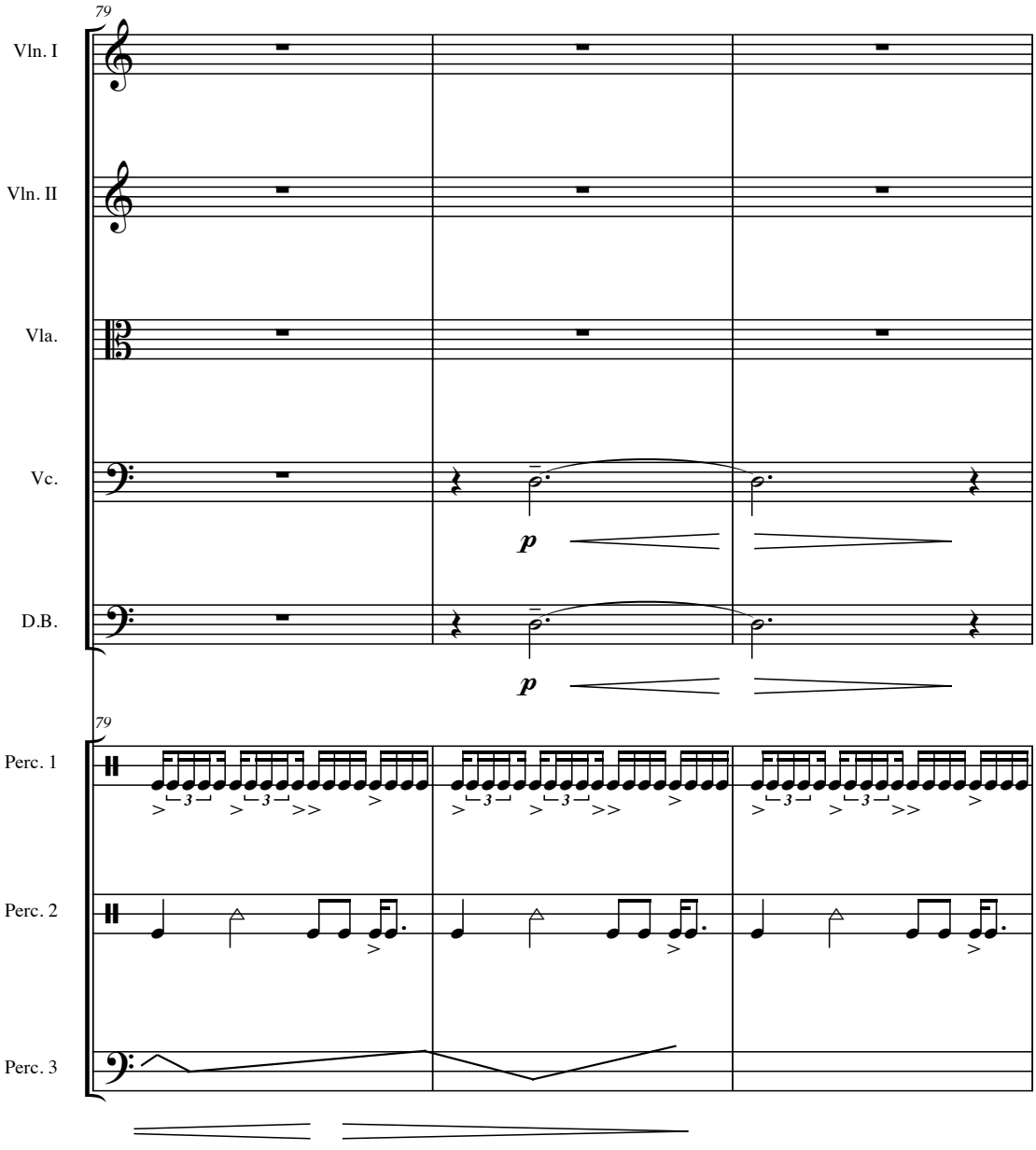

60
Vln. I
Vln. II
Vla.
Vc.
D.B.
f
mp
p
60
Water Tam:
(Stike tam, then dip into water)
Perc. 1
Med. Slate Gong:
Perc. 2
Lg. Slate Gong:
Perc. 3

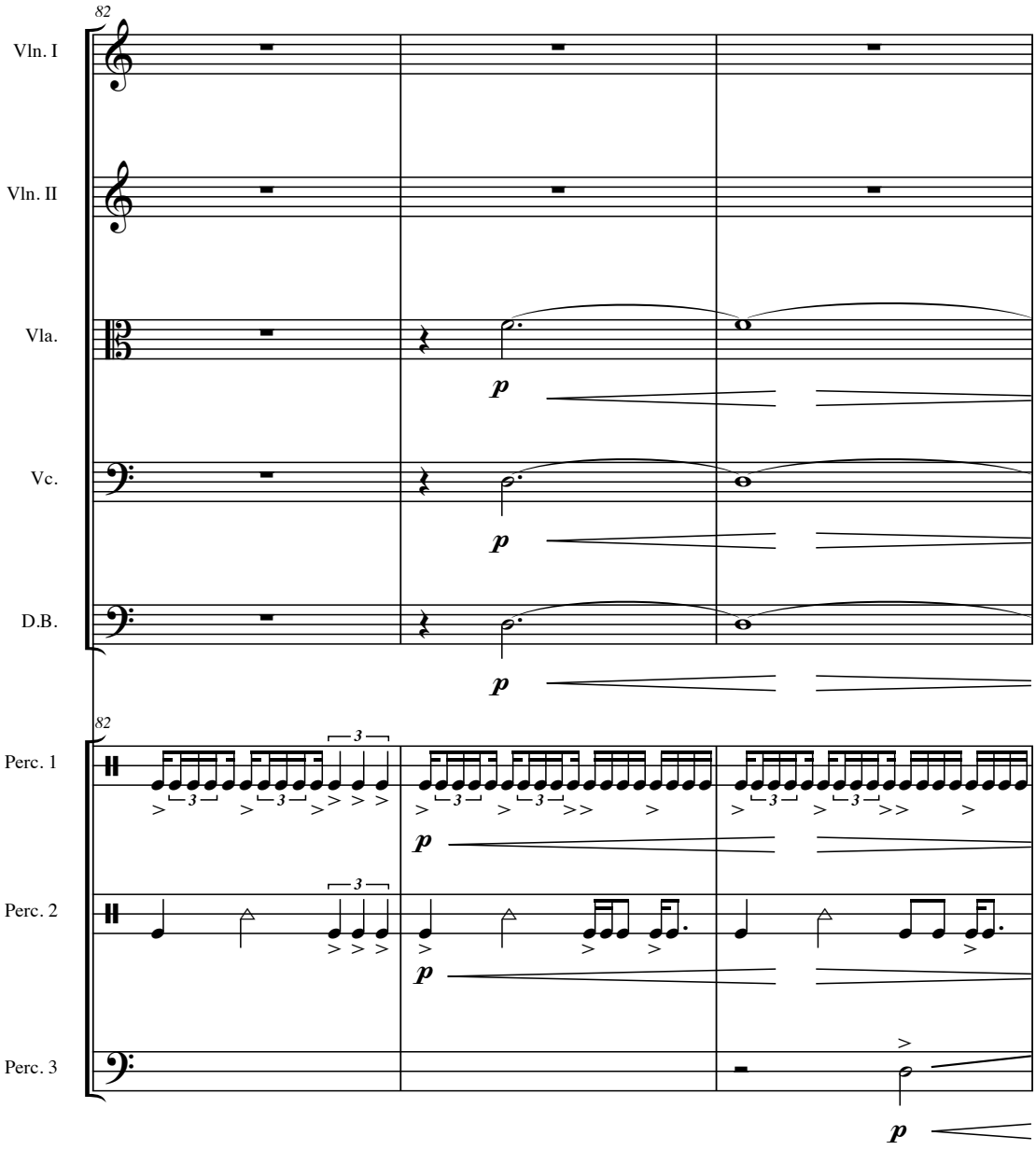

64
Vln. I
p
Vln. II
Vla.
Vc.
D.B.
64
Water Tam:
Perc. 1
p
Re-strike as needed
to maintain resonance
Perc. 2
p
Perc. 3
p

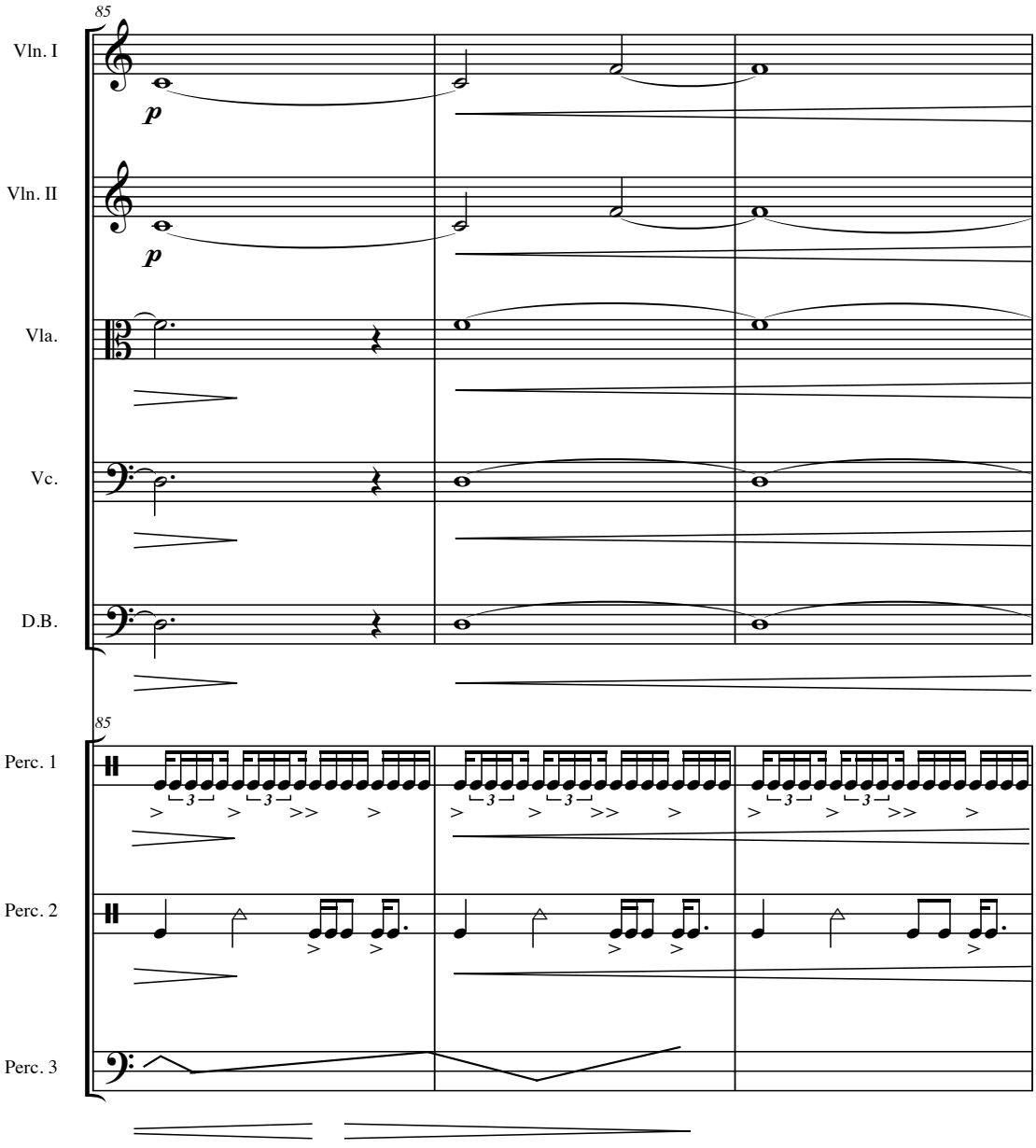

D
Moderato (♩= 78)
69
Vln. I
Vln. II
Vla.
Vc.
D.B.
69
Dumbek:
Perc. 1
Djembe:
Perc. 2
Perc. 3

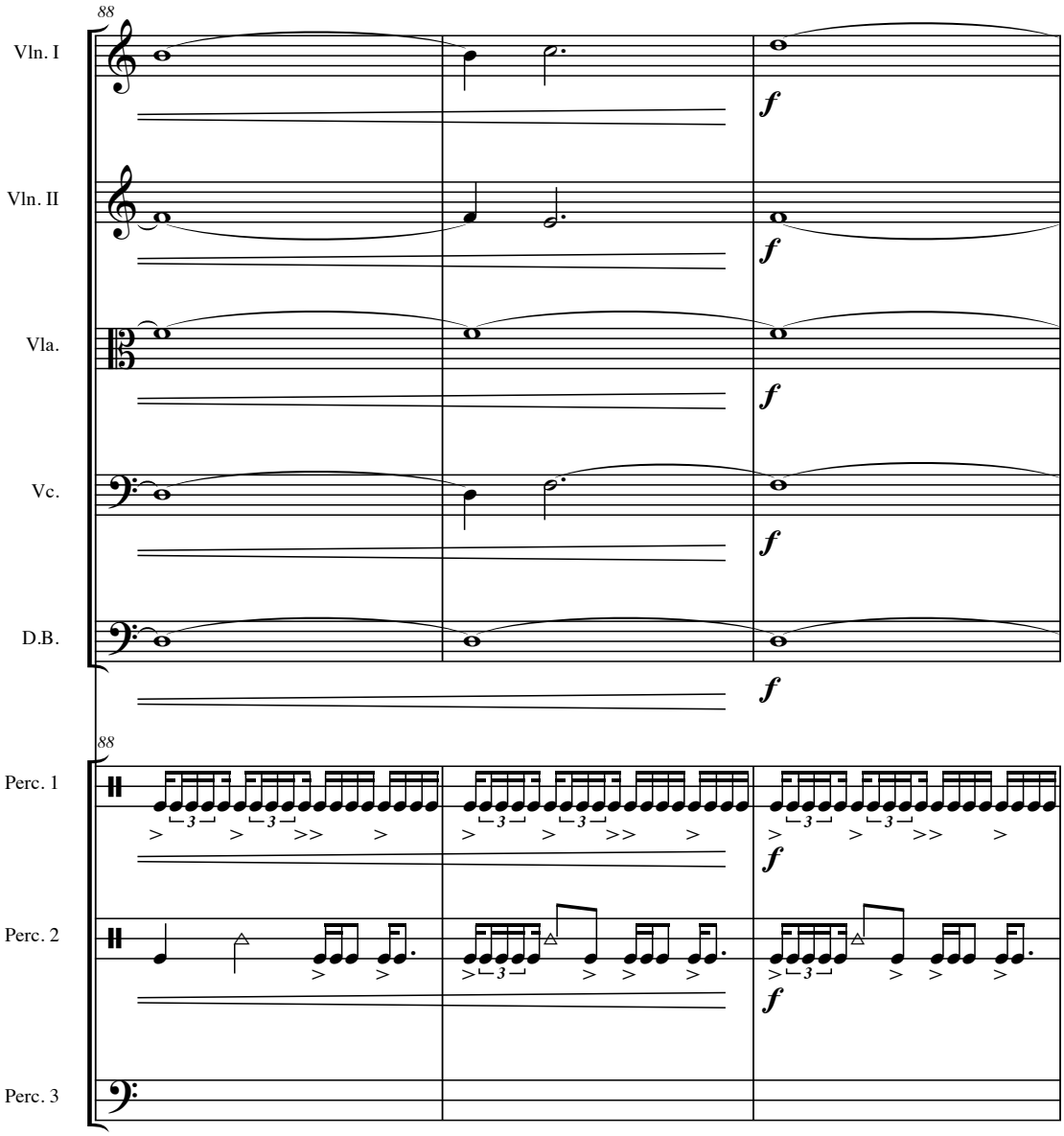

73
Vln. I
Vln. II
Vla.
Vc.
D.B.
73
Perc. 1
Perc. 2
Perc. 3

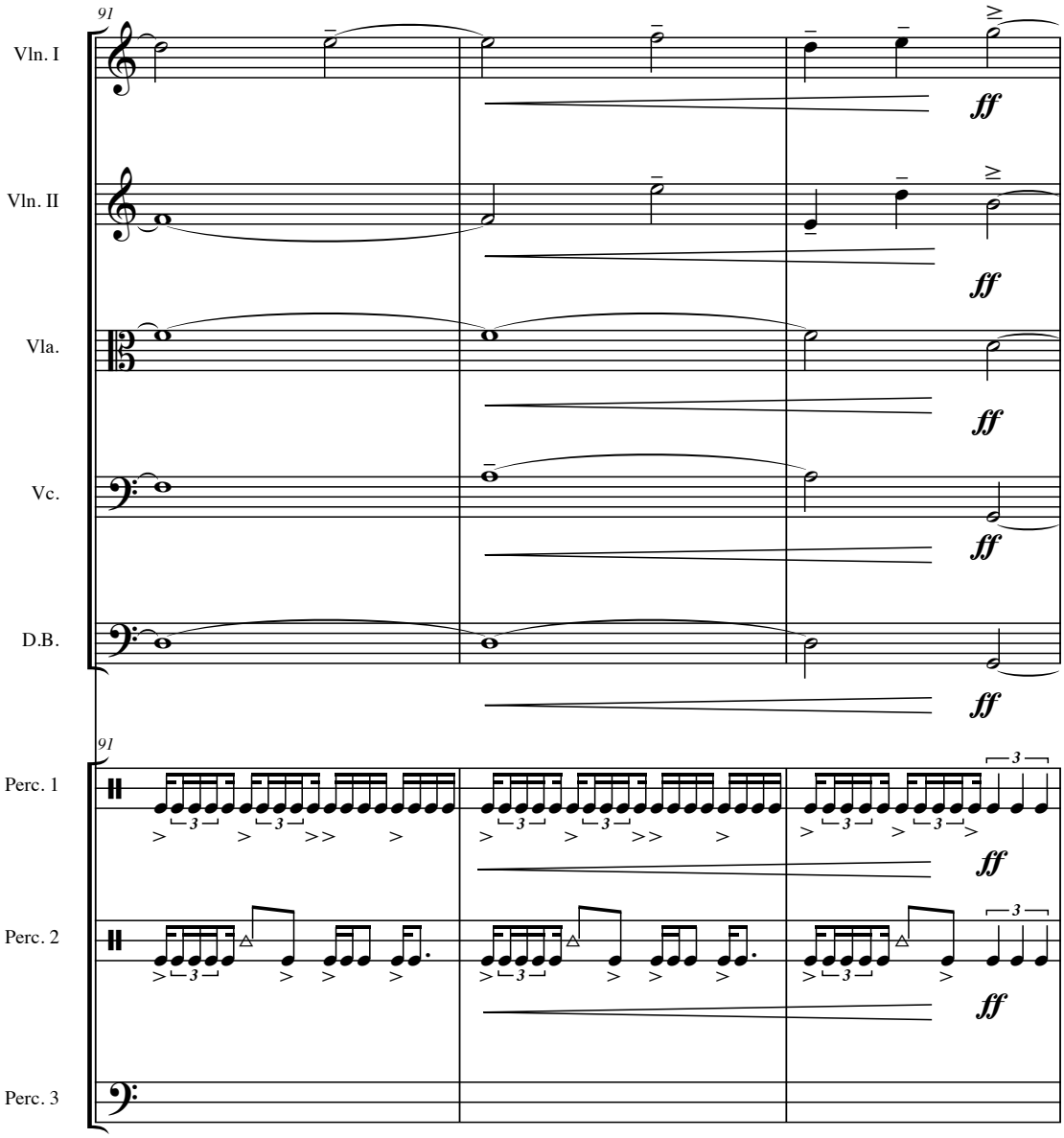

76
Vln. I
Vln. II
Vla.
Vc.
D.B.
p
76
Perc. 1
Perc. 2
Perc. 3
p

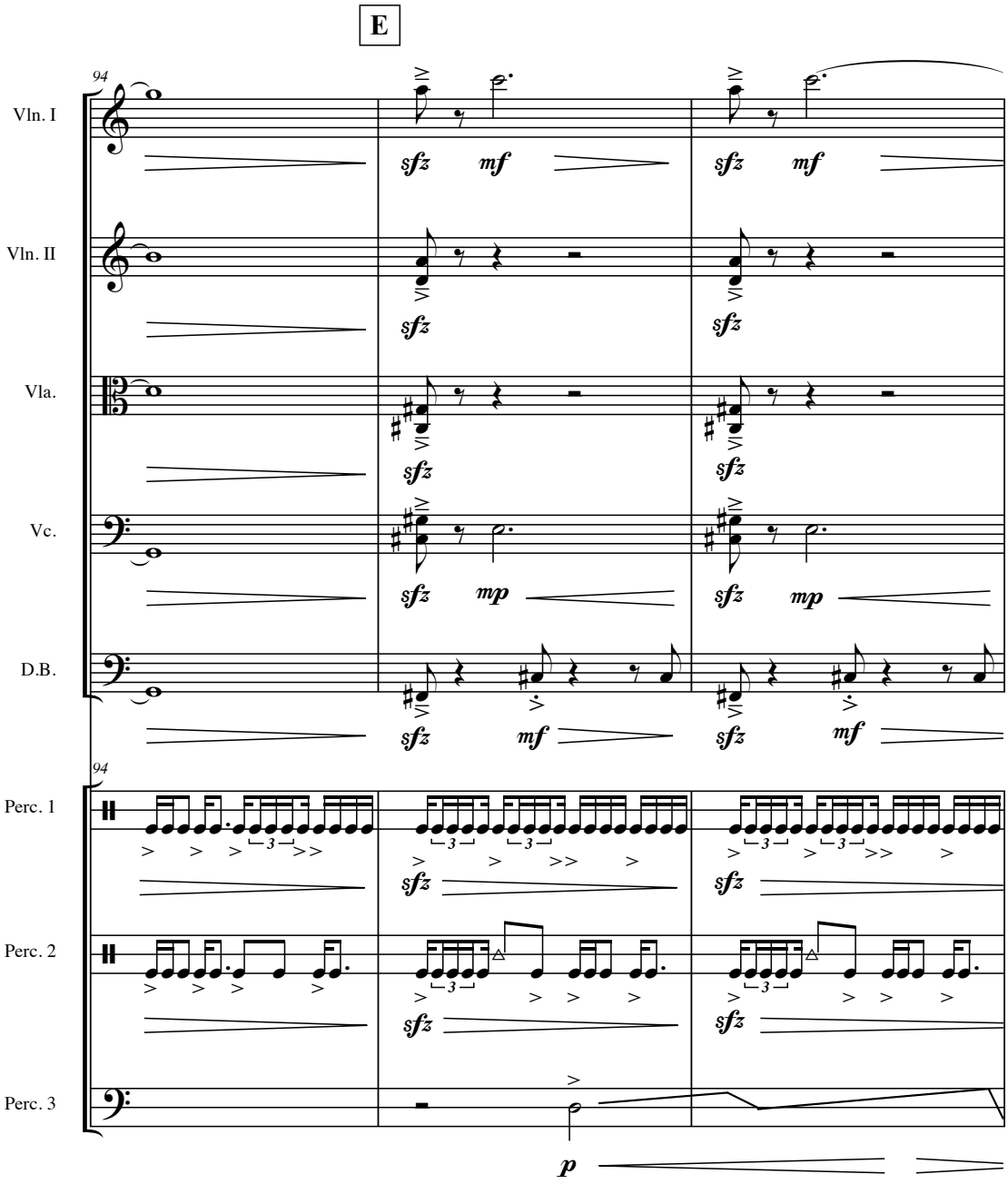

79
Vln. I
Vln. II
Vla.
Vc.
p
D.B.
p
79
Perc. 1
Perc. 2
Perc. 3

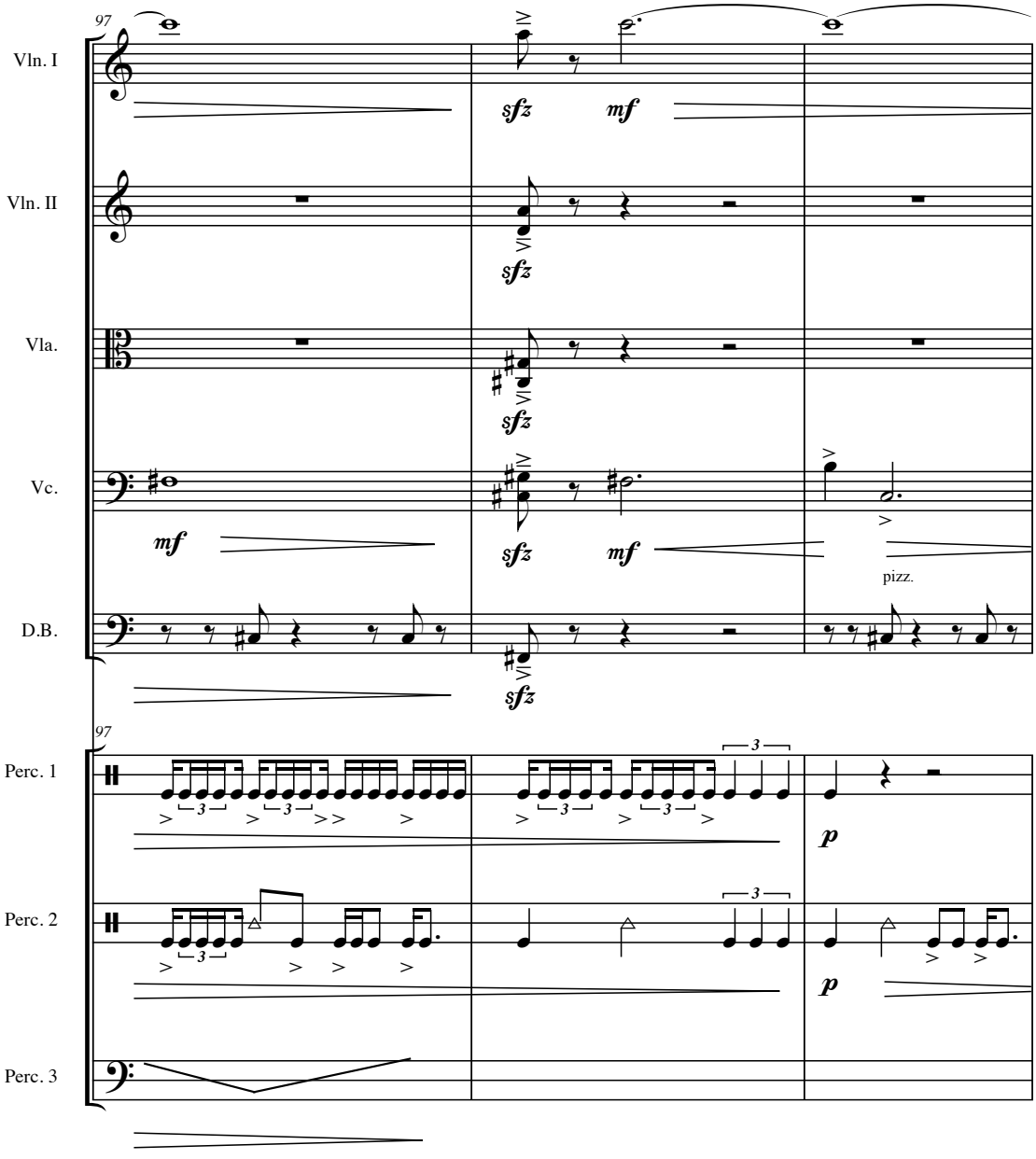

82
Vln. I
Vln. II
Vla.
Vc.
D.B.
p
82
Perc. 1
Perc. 2
Perc. 3
3
p

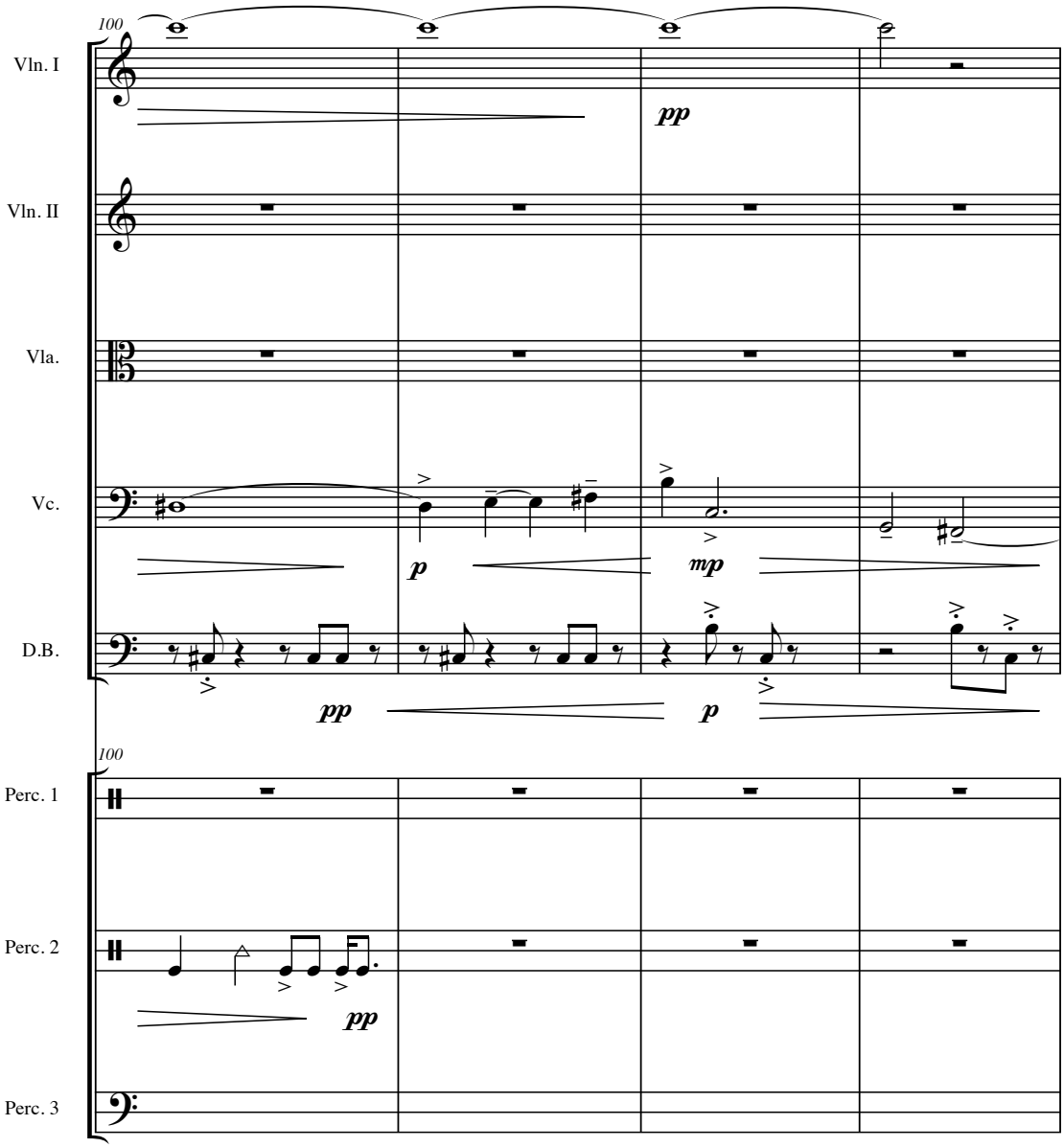

85
Vln. I
p
Vln. II
p
Vla.
Vc.
D.B.
85
Perc. 1
Perc. 2
Perc. 3

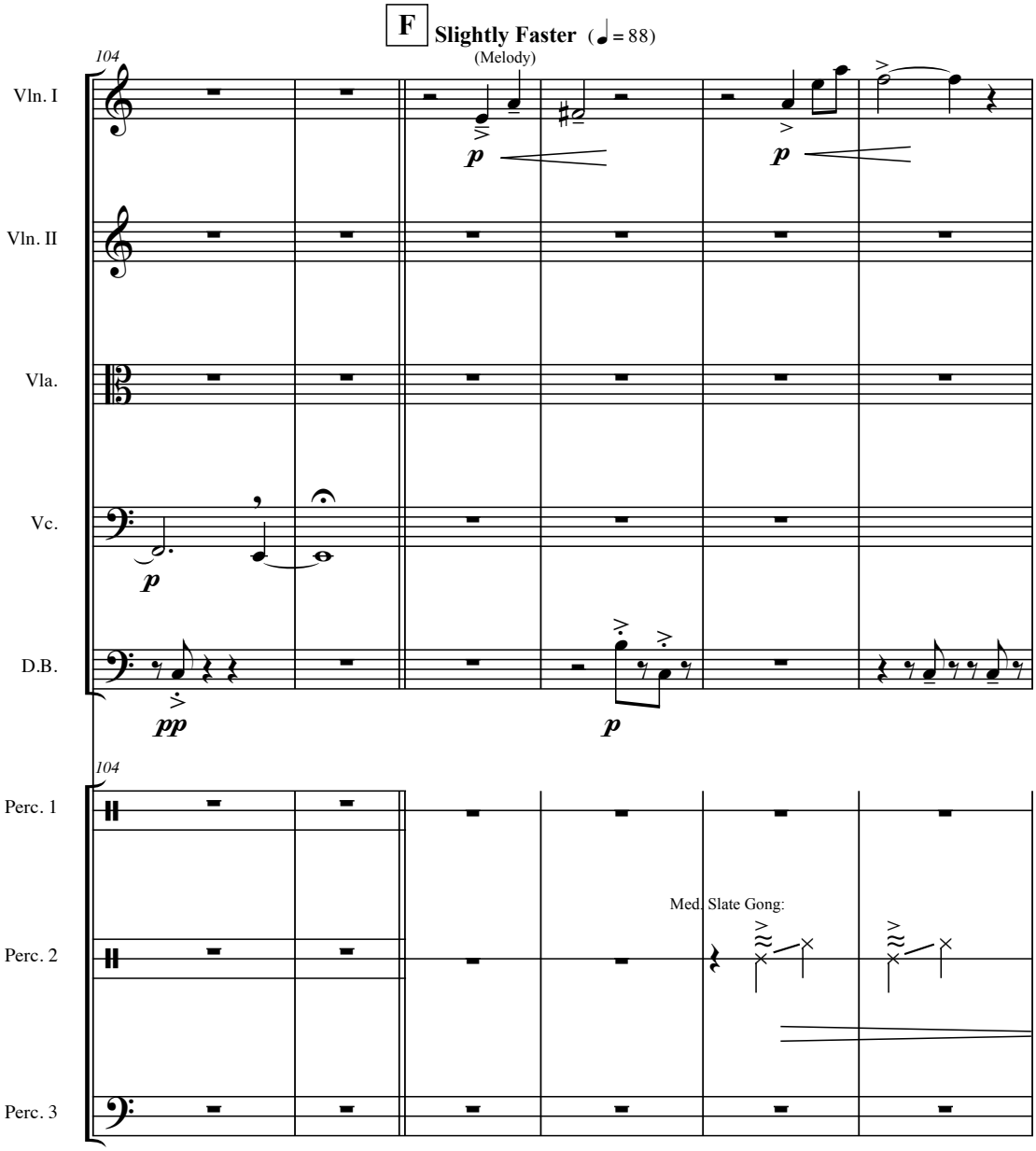

88
Vln. I
Vln. II
Vla.
Vc.
D.B.
f
88
Perc. 1
Perc. 2
Perc. 3
3

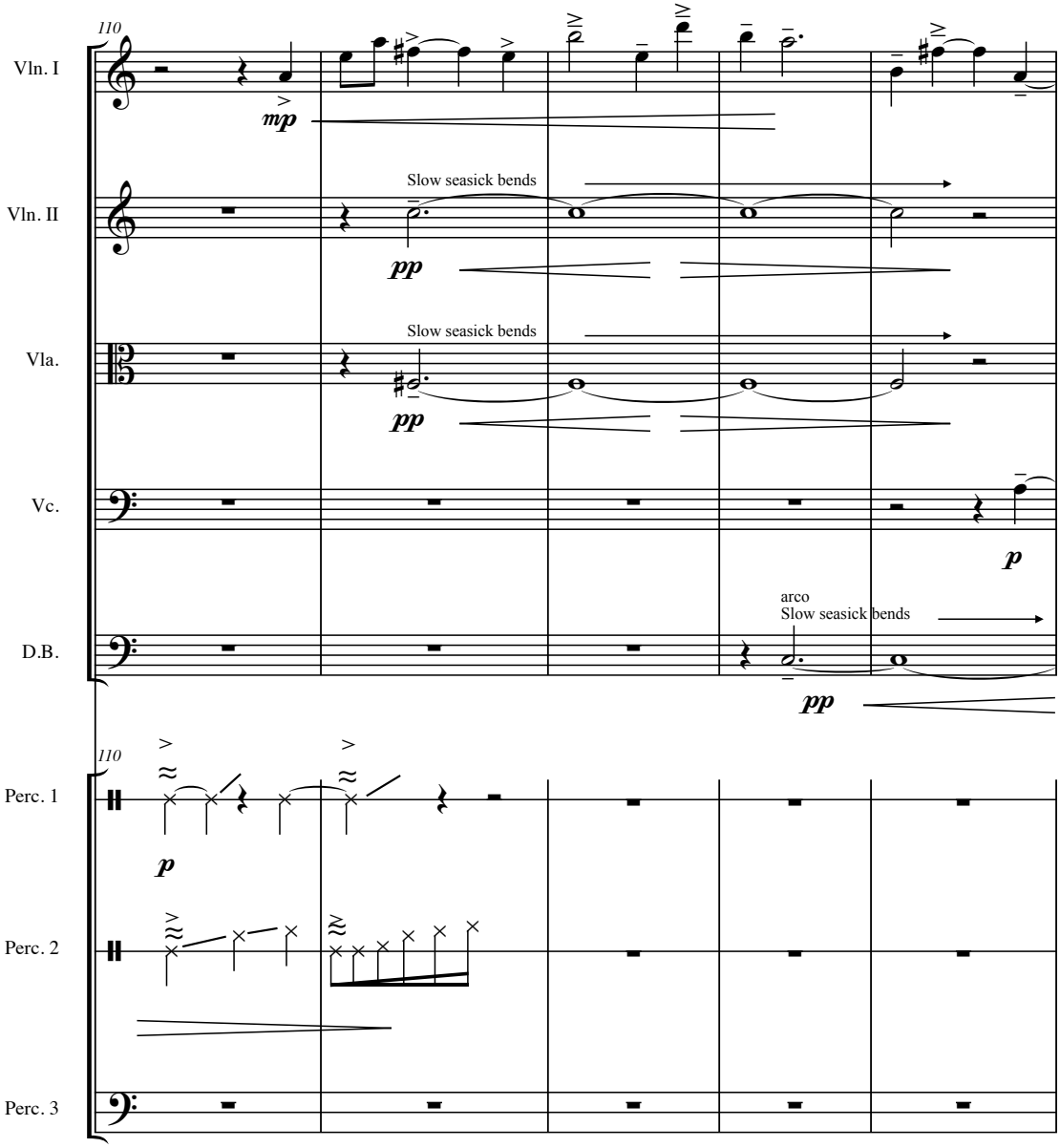

91
Vln. I
Vln. II
Vla.
Vc.
D.B.
ff
91
Perc. 1
Perc. 2
Perc. 3
3
ff

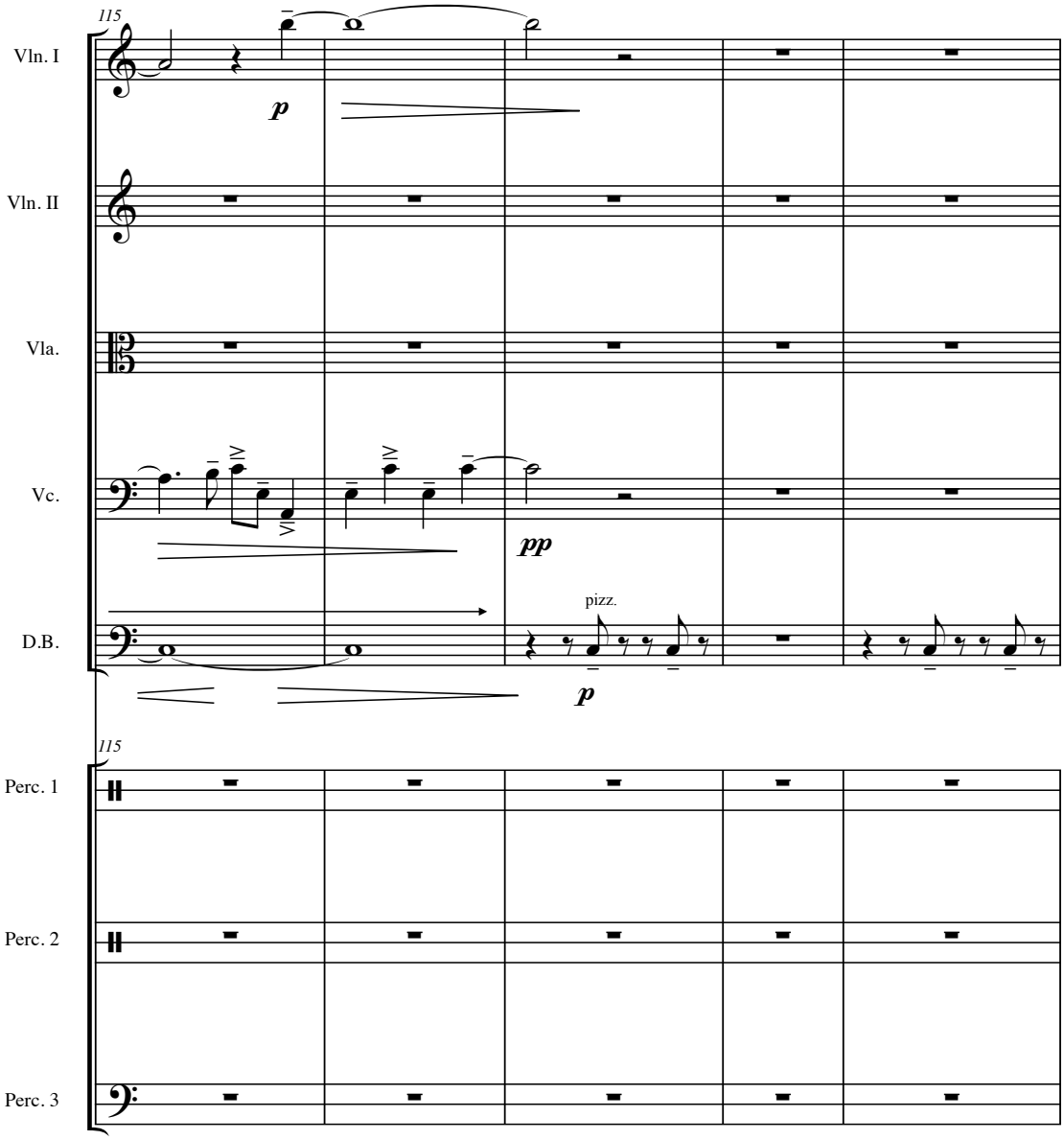

E
94
Vln. I
Vln. II
Vla.
Vc.
D.B.
94
Perc. 1
Perc. 2
Perc. 3
sfz
mf
mp
p

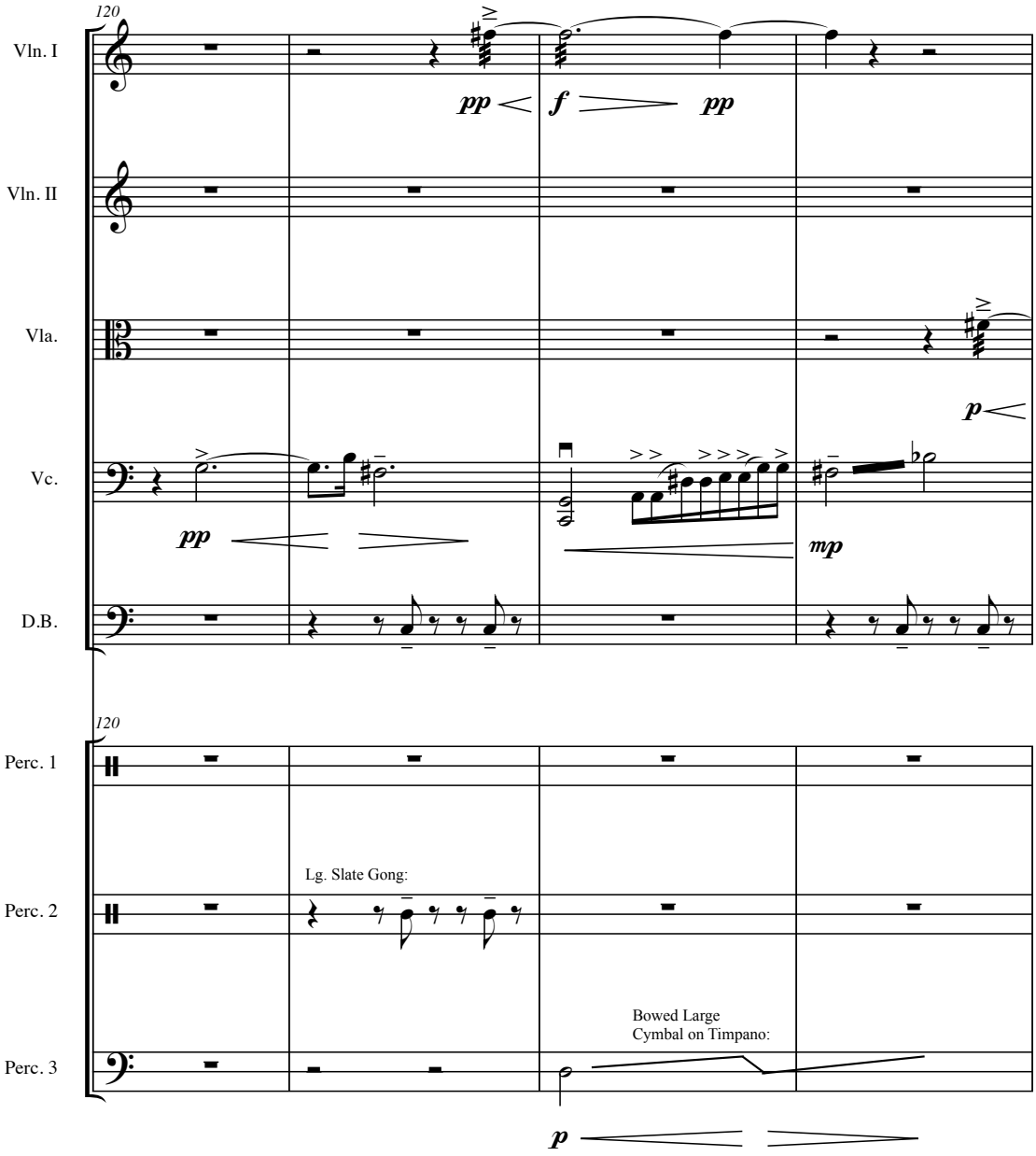

97
Vln. I
sfz
mf
Vln. II
sfz
Vla.
sfz
Vc.
mf
sfz
mf
pizz.
D.B.
sfz
97
Perc. 1
3
p
Perc. 2
3
p
Perc. 3

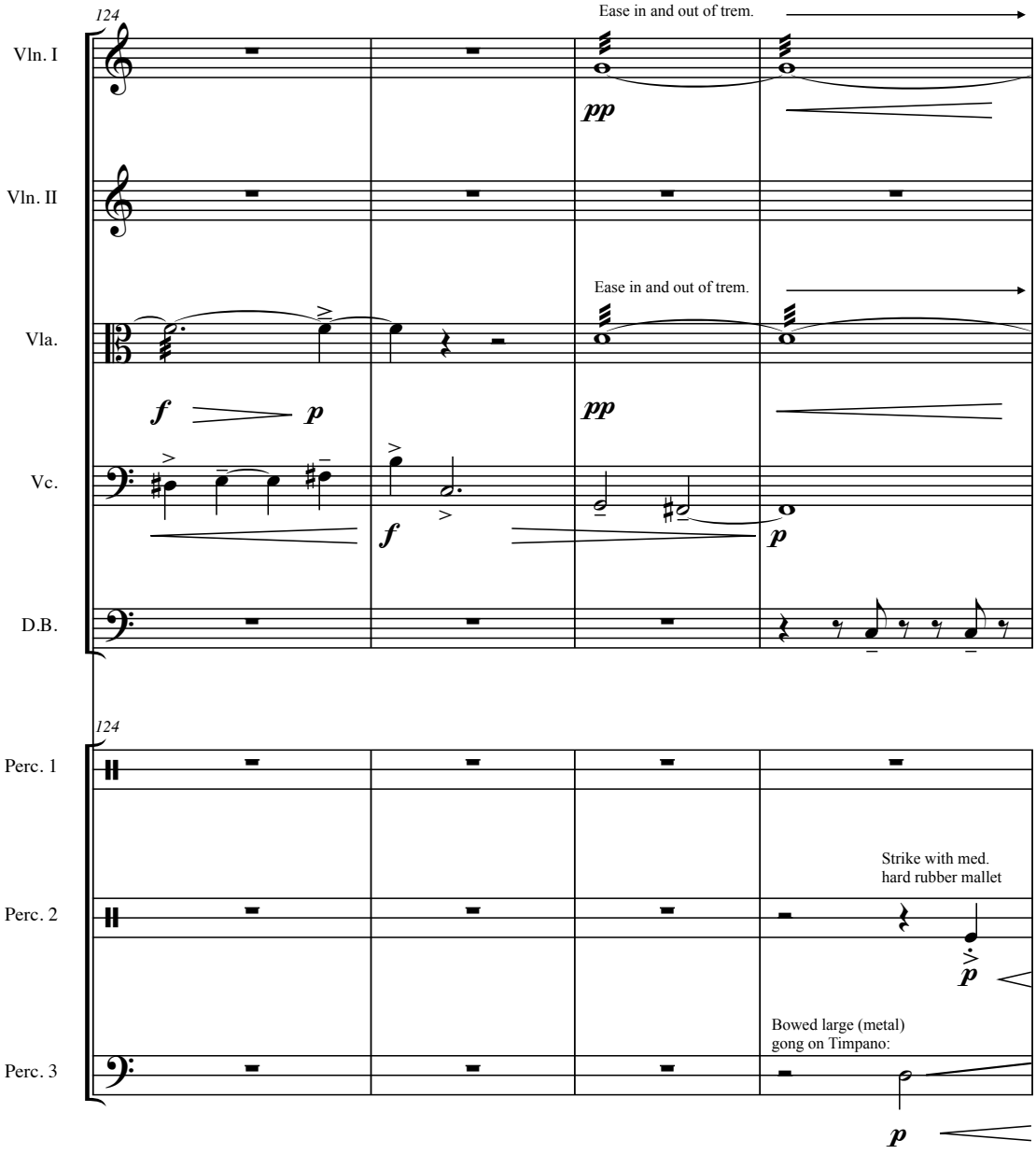

100
Vln. I
pp
Vln. II
Vla.
Vc.
p
mp
D.B.
pp
p
100
Perc. 1
Perc. 2
pp
Perc. 3

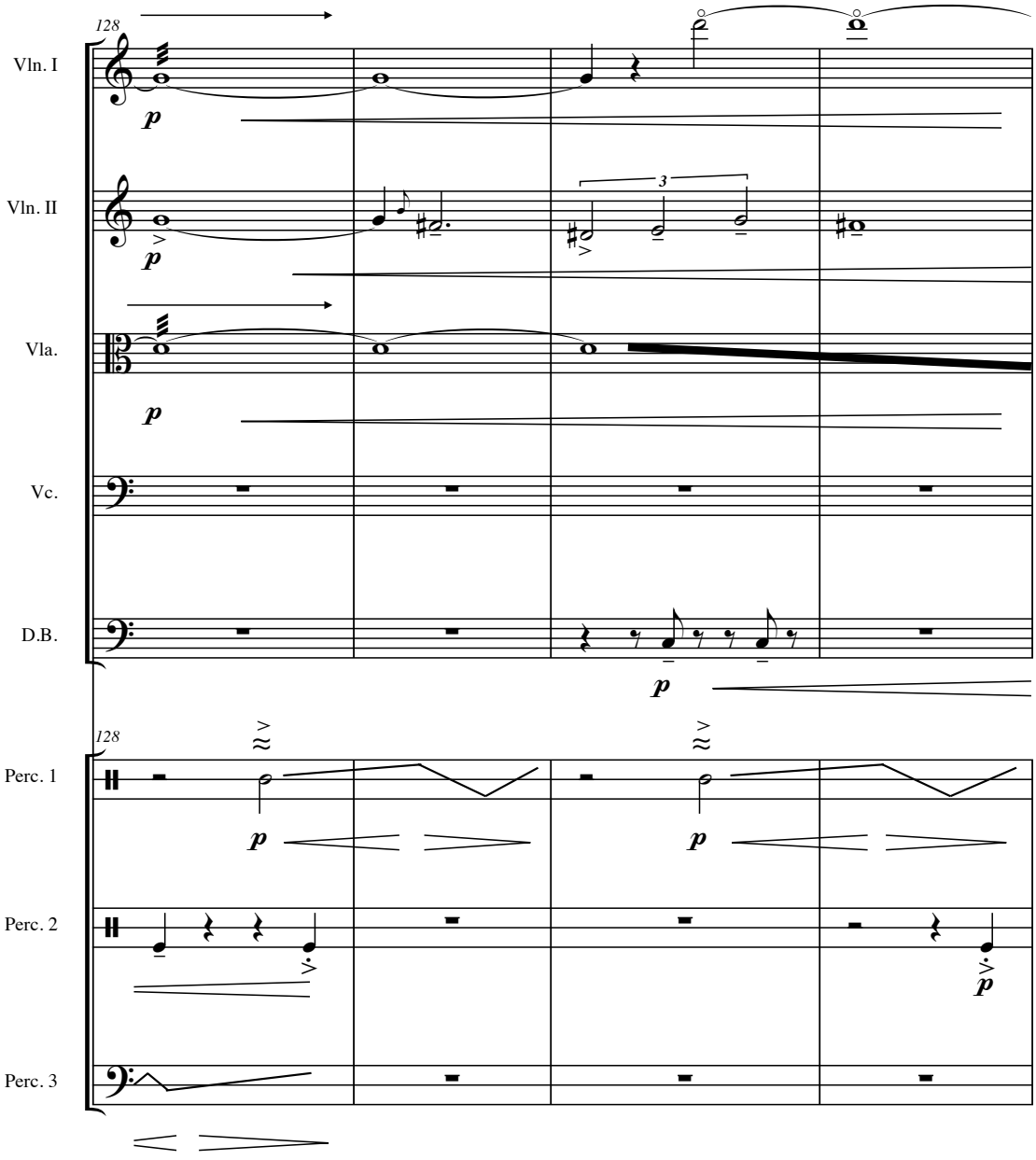

F
Slightly Faster (♩ = 88)
(Melody)
104
Vln. I
Vln. II
Vla.
Vc.
D.B.
pp
p
p
p
104
Perc. 1
Perc. 2
Perc. 3
Med. Slate Gong:

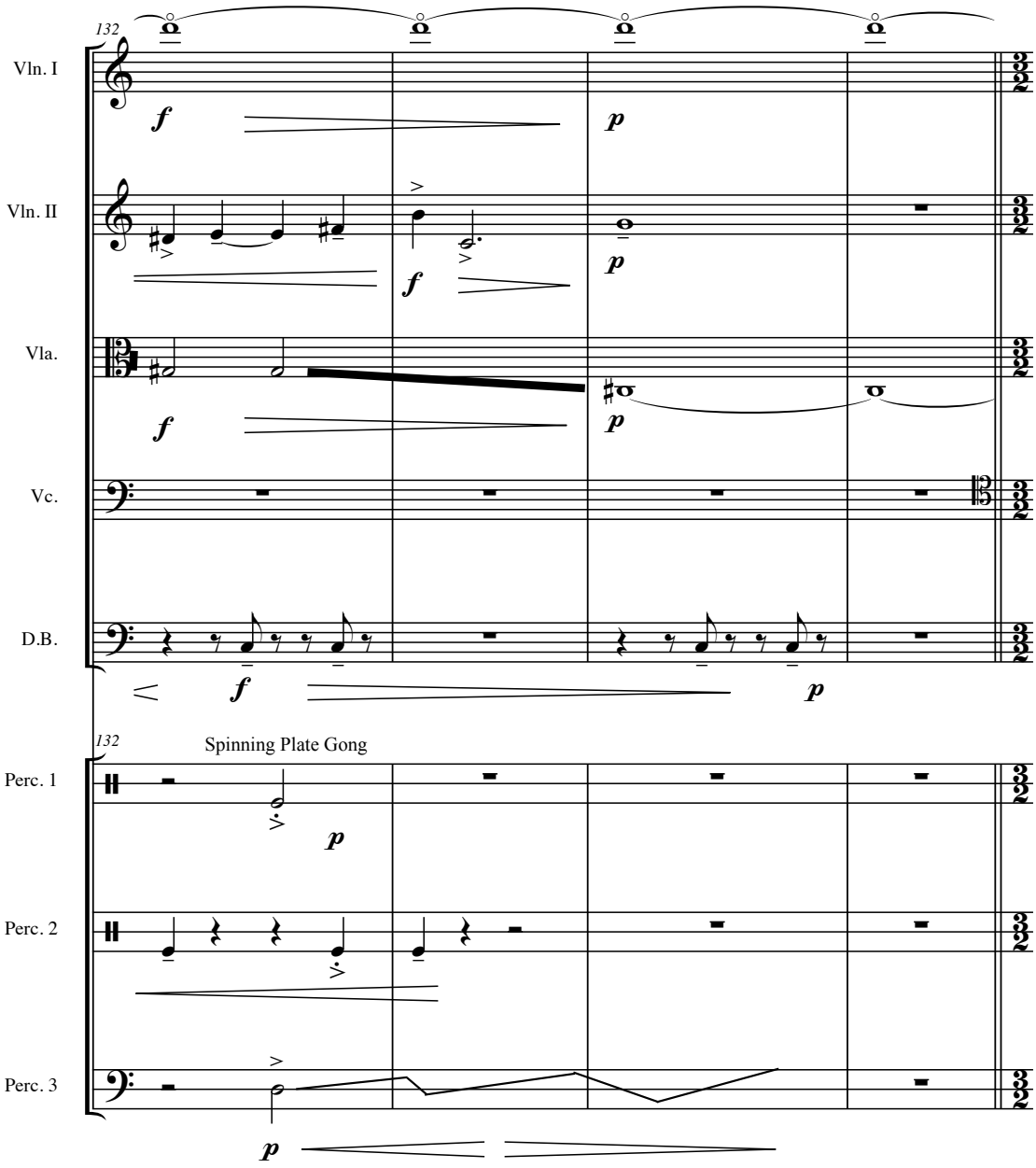

110
Vln. I
mp
Vln. II
Slow seasick bends
pp
Vla.
Slow seasick bends
pp
Vc.
p
D.B.
arco
Slow seasick bends
pp
110
Perc. 1
p
Perc. 2
Perc. 3

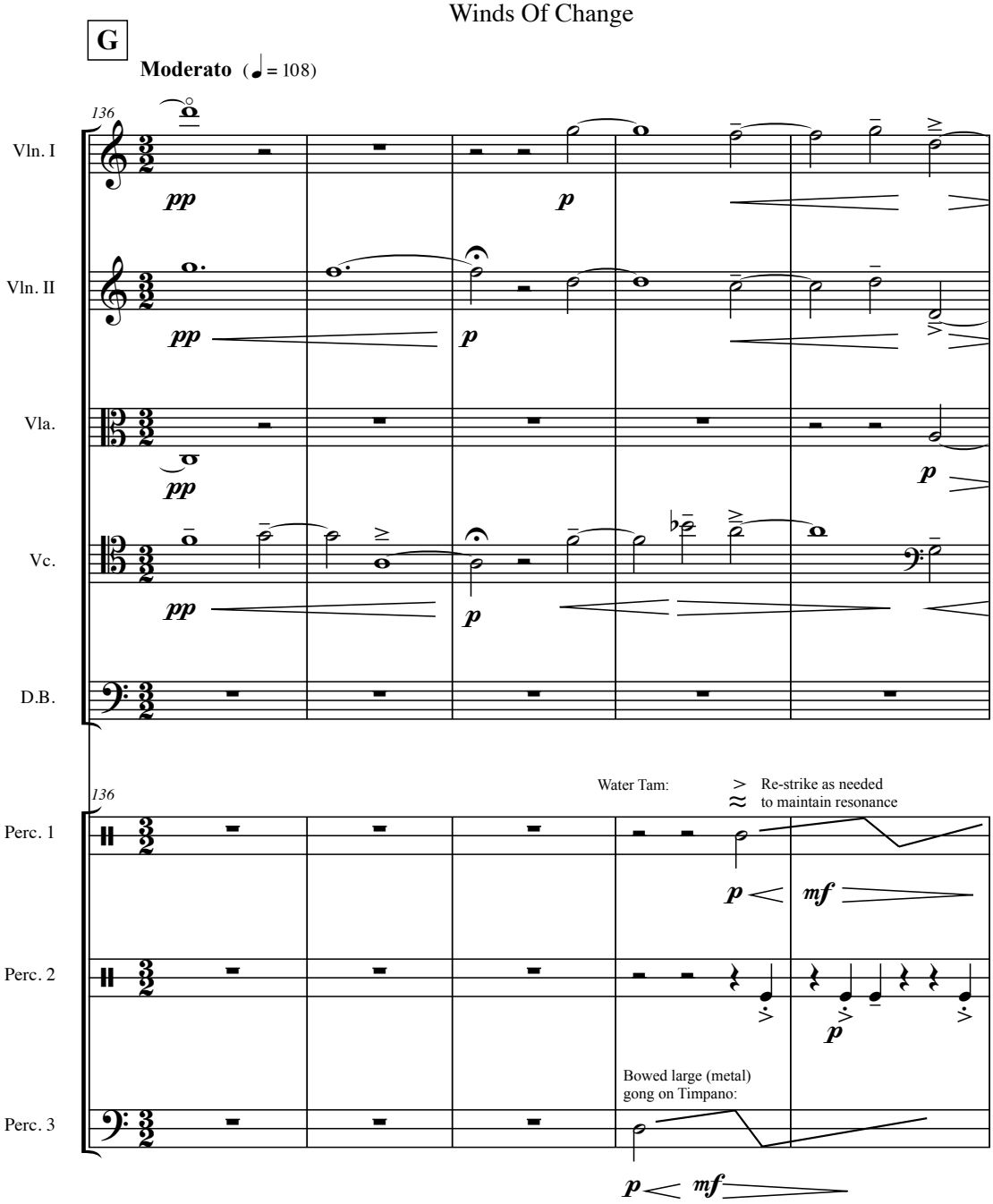

115
Vln. I
Vln. II
Vla.
Vc.
D.B.
p
pp
pizz.
p
115
Perc. 1
Perc. 2
Perc. 3

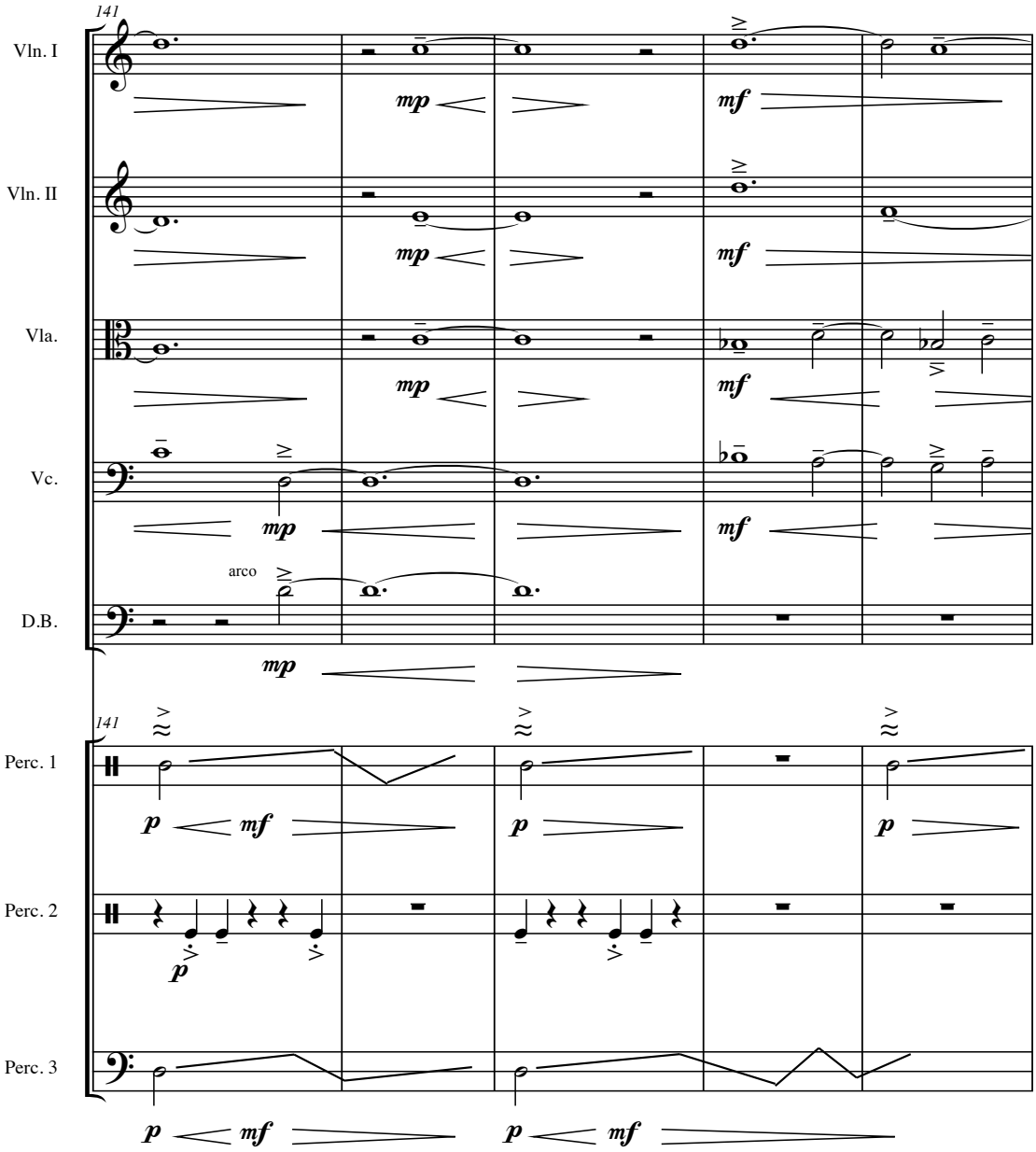

120
Vln. I
pp
f
pp
Vln. II
Vla.
p
Vc.
pp
mp
D.B.
120
Perc. 1
Lg. Slate Gong:
Perc. 2
Bowed Large
Cymbal on Timpano:
Perc. 3
p

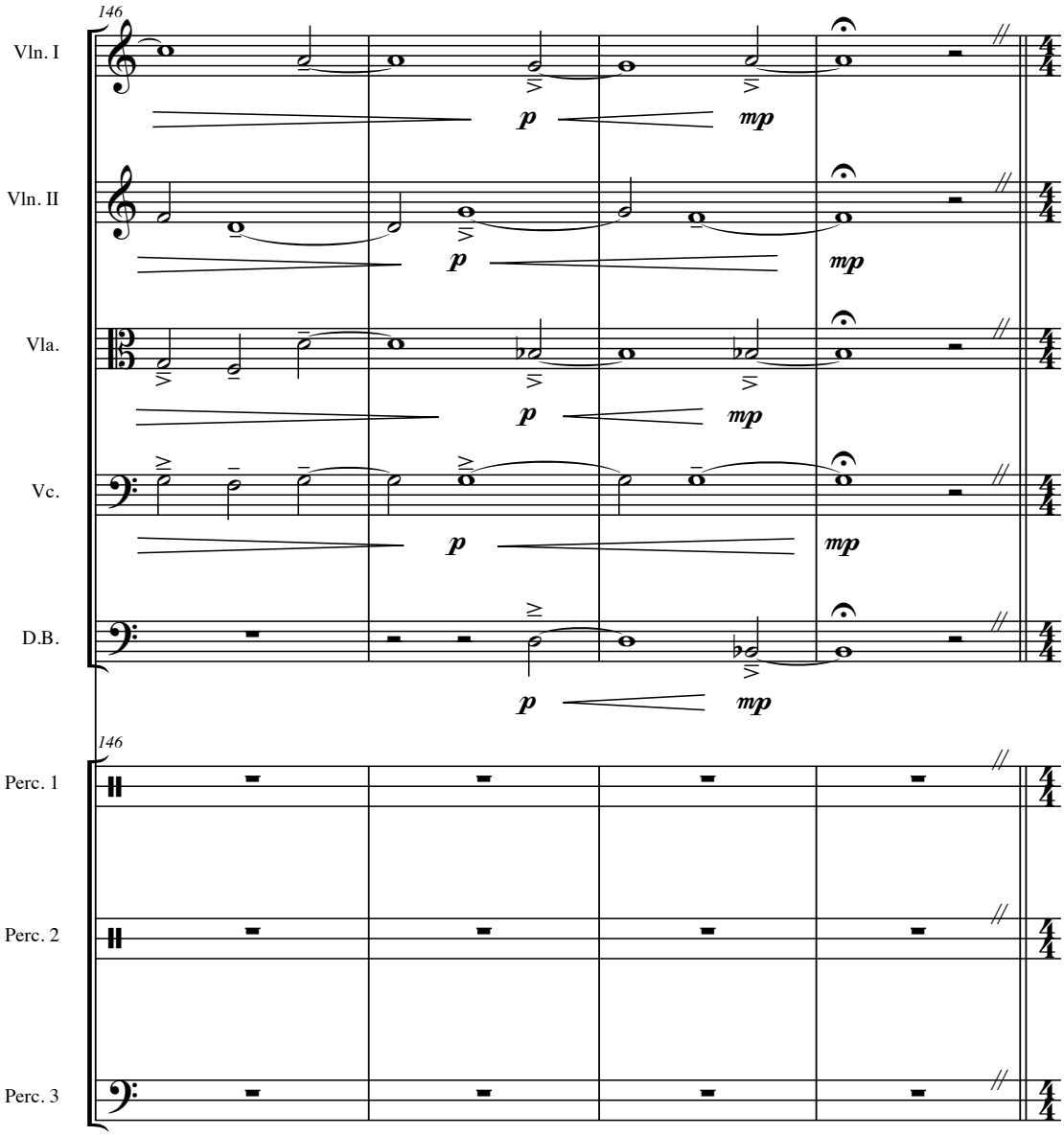

124
Vln. I
Vln. II
Vla.
Vc.
D.B.
Ease in and out of trem.
pp
Ease in and out of trem.
f
p
pp
f
p
124
Perc. 1
Perc. 2
Perc. 3
Strike with med.
hard rubber mallet
p
Bowed large (metal)
gong on Timpano:
p

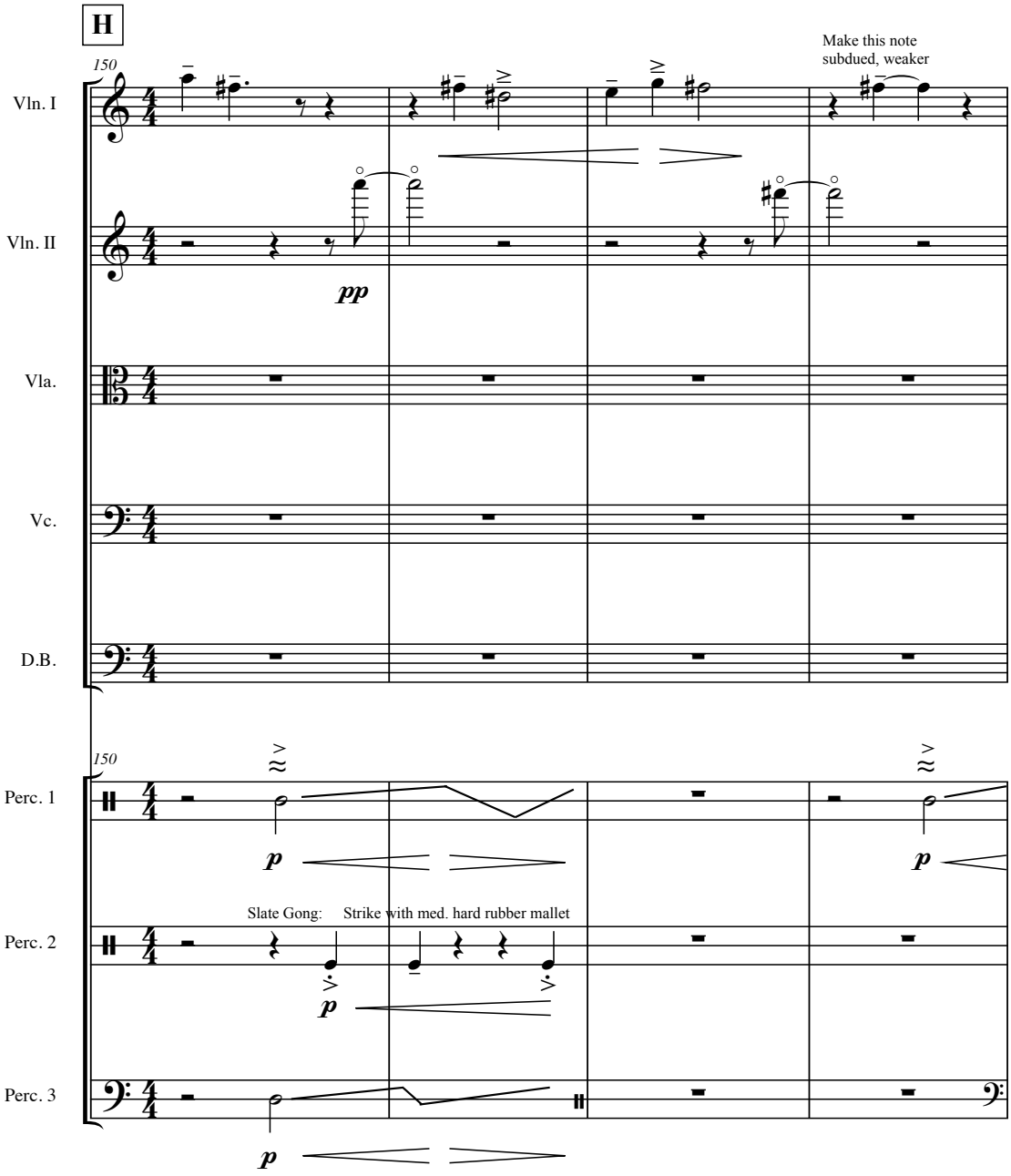

128
Vln. I
Vln. II
Vla.
Vc.
D.B.
p
3
128
Perc. 1
Perc. 2
Perc. 3
p

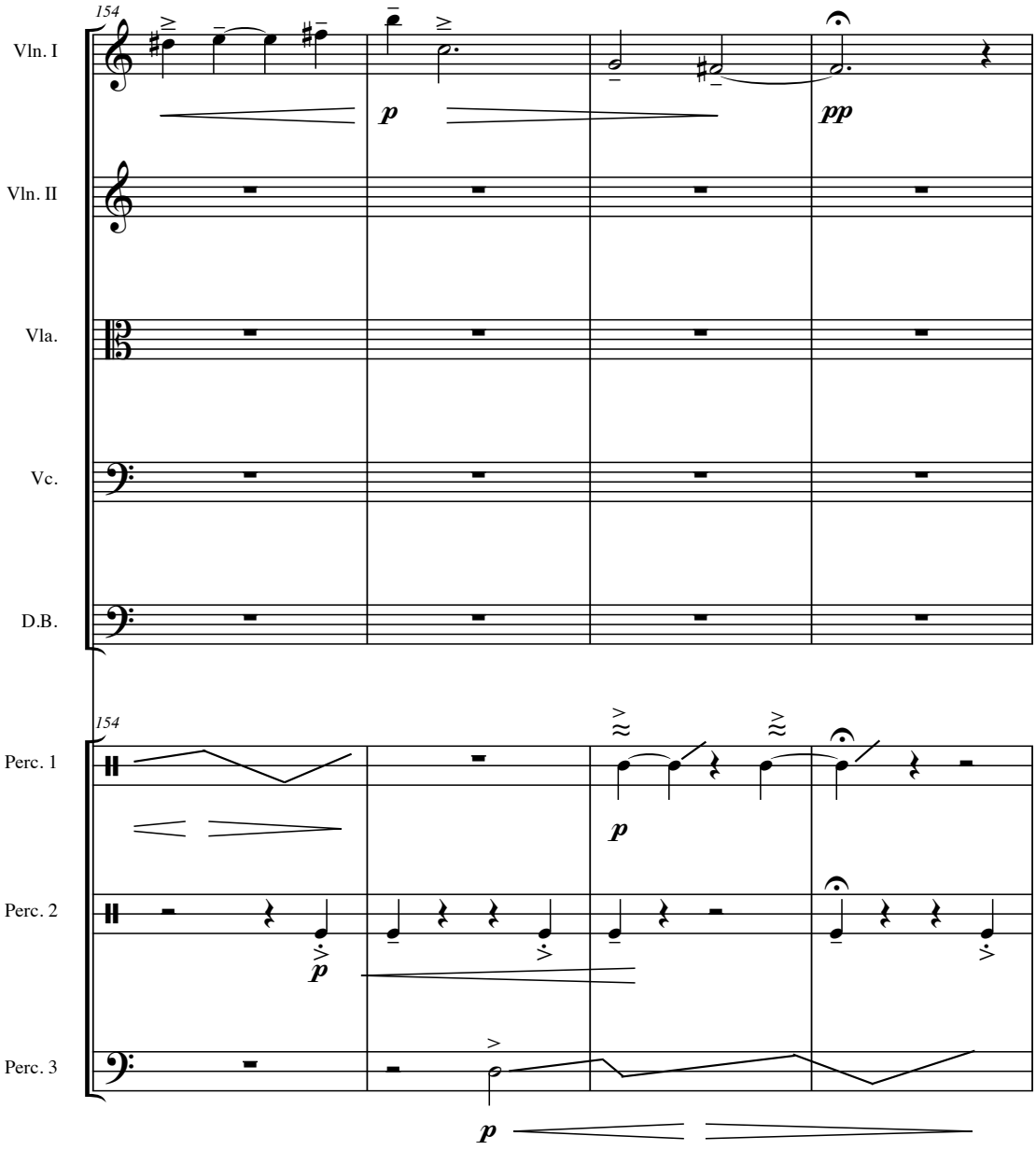

132
Vln. I
Vln. II
Vla.
Vc.
D.B.
132
Spinning Plate Gong
Perc. 1
Perc. 2
Perc. 3

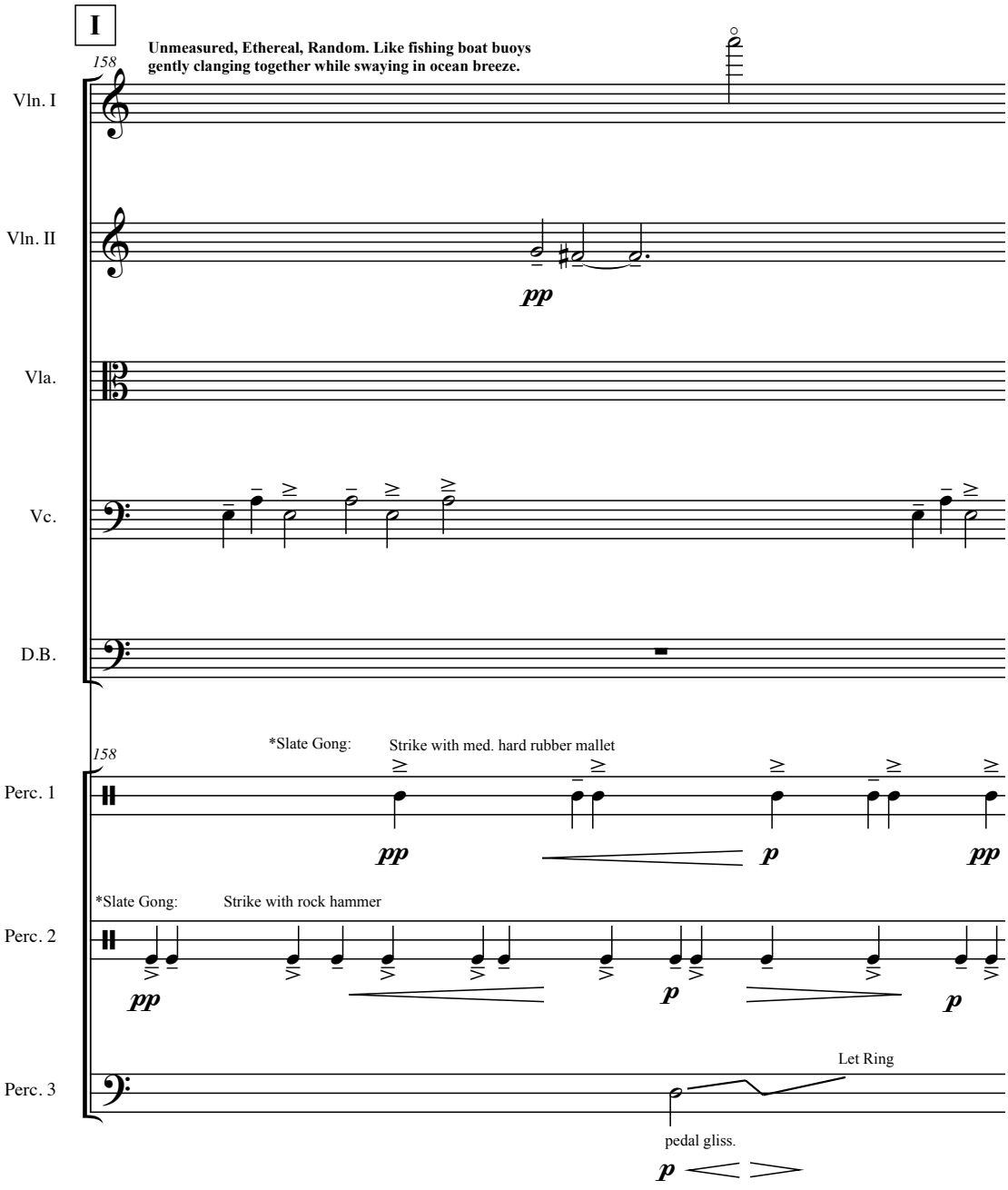

G
Moderato (♩= 108)
136
Vln. I
Vln. II
Vla.
Vc.
D.B.
pp
p
136
Water Tam:
Re-strike as needed
to maintain resonance
Perc. 1
Perc. 2
Perc. 3
mf
Bowed large (metal)
gong on Timpano:

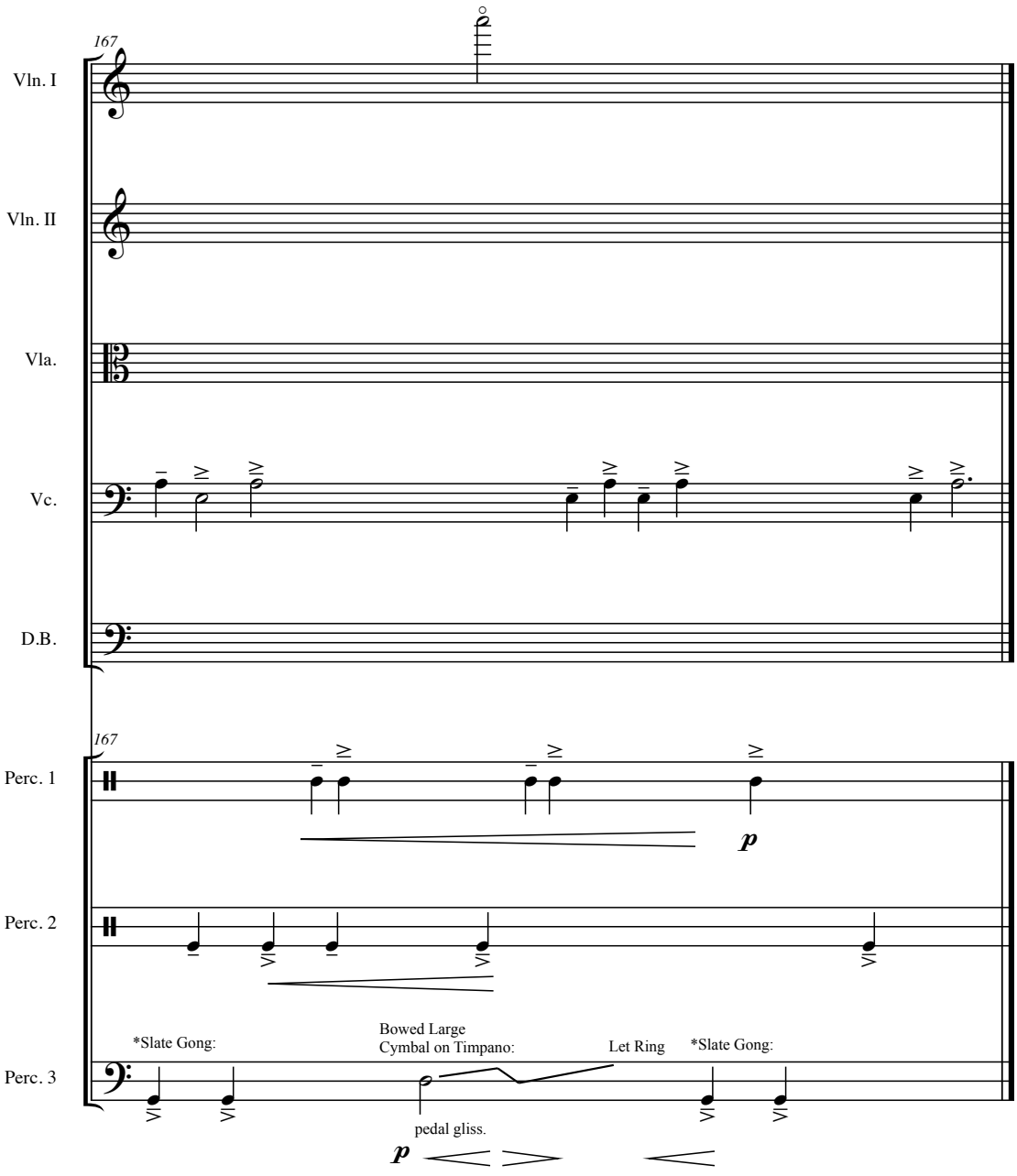

141
Vln. I
Vln. II
Vla.
Vc.
D.B.
arco
141
Perc. 1
Perc. 2
Perc. 3


146
Vln. I
Vln. II
Vla.
Vc.
D.B.
p
mp
146
Perc. 1
Perc. 2
Perc. 3


H
150
Make this note subdued, weaker
Vln. I
Vln. II
pp
Vla.
Vc.
D.B.
150
Perc. 1
p
Slate Gong: Strike with med. hard rubber mallet
Perc. 2
p
Perc. 3
p


154
Vln. I
Vln. II
Vla.
Vc.
D.B.
154
Perc. 1
Perc. 2
Perc. 3
p
pp
p
p
p


I
Unmeasured, Ethereal, Random. Like fishing boat buoys gently clanging together while swaying in ocean breeze.
158
Vln. I
Vln. II
pp
Vla.
Vc.
D.B.
158
*Slate Gong:
Strike with med. hard rubber mallet
Perc. 1
pp
p
pp
*Slate Gong:
Strike with rock hammer
Perc. 2
pp
p
p
Let Ring
Perc. 3
pedal gliss.
p


167
Vln. I
Vln. II
Vla.
Vc.
D.B.
167
Perc. 1
p
Perc. 2
Perc. 3
*Slate Gong:
Bowed Large
Cymbal on Timpano:
Let Ring
*Slate Gong:
pedal gliss.
p